ORDER NO. VRD9004M114

Service Manual

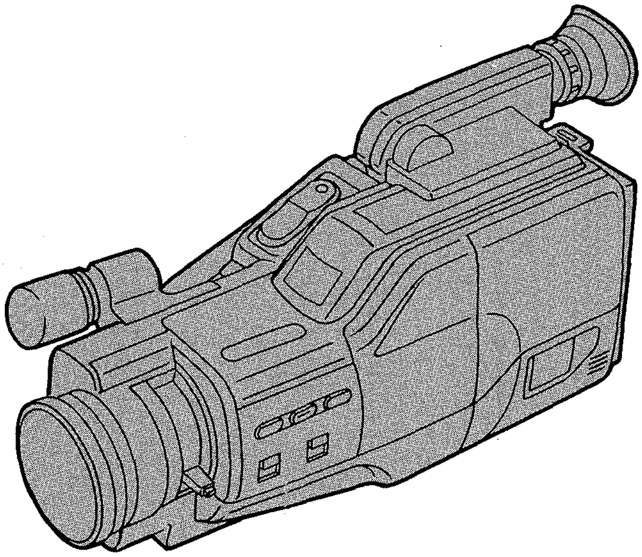
VHS-C Movie

Panasonic VHS C SECAM

HQ

NV-MC20F

General Description
Adjustment Procedures
Block / Schematic Diagrams
Exploded Views / Parts List



SPECIFICATIONS

ITEM	SPECIFICATION
POWER	Source: BATTERY; DC 9.6V Consumption; Camera search mode; 9.0W (Battery operation)
VIDEO RECORDING SYSTEM	4 rotary heads, helical scanning system SECAM
TAPE FORMAT	VHS-C Cassette Tape (Tape width 12.7mm)
TAPE SPEED	SP mode: 23.39mm/s Record/Playback Time 30min. with NV-EC30SG FF/REW Time less than 3min. with NV-EC30SG
CAMERA	PICK-UP ELEMENT: CCD (Charge Coupled Device)
	STANDARD ILLUMINATION: 1,400 lux
	MINIMUM REQUIRED ILLUMINATION: 10 lux
	LENS: Built-in 6 : 1, Power Zoom Lens with MACRO Function, Auto Iris, Auto Focus System, F1.2 (9∼54mm), Lens Front Diameter/φ49mm
	VIEW FINDER: 2/3″ Electric View Finder

ITEM	SPECIFICATION
VIDEO	HEADS: 4 rotary heads, 1 flging erase head
	OUTPUT (PHONO Type): 1.0±0.15Vp-p 75Ω unbalanced
AUDIO	HEAD: 1 Stationary head
	OUTPUT (PHONO Type): −8dB 600Ω unbalanced
WEIGHT	Approx. 1.3kg (without Battery Pack)
DIMENSIONS	124(W)×140(H)×328(D)mm
STANDARD ACCESSORIES	1 pc. AV Output Cable 1 pc. AC Adaptor 1 pc. Battery Pack 1 pc. Shoulder Strap 1 pc. Battery for Clock & VHS-C Adaptor 1 pc. VHS-C Cassette Tape 1 pc. DC Input Cable

Weight and dimensions shown are approximate.
Specifications are subject to change without notice.

Panasonic

Matsushita Electric Industrial Co., Ltd.
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INTRODUCTION

This service manual contains technical information which will allow service personnels to understand and service this model.
Section 1 presents you with some general information of features and controls, enabling you to become familiar with each function.
Section 2 contributes to your mechanical and electrical adjustment as well disassembly and replacement procedures.
In the case of very common information relating to other models like mechanical adjustments, please refer to each service manual.
Section 3 contains block diagrams which offers you information for checking and understanding each circuit. Schematic diagrams which give you detailed information such as waveforms, voltage data, function e.t.c...
Section 4 contains exploded views and parts list.
Please place orders using the parts list and not the drawing reference numbers.
If the circuit is changed or modified, this information will be followed by supplementary service manual to be filed with original service manual.

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Technical Information

Service Caution

1. Servicing the VTR Section

When servicing the VTR section, connection of the extension cabies and Y/C separator are necessary as shown in Fig. S1, S2.

Servicing Fixtures (VTR Section)

PART NO.	PART NAME	PCS	CONNECTION
VFK0607	Extension Cable (26P)	1	P2001~P2601
VFKS0067	Extension Cable (20P)	1	P5001~P3501
VFKS0060	Extension Cable (2P)	1	P6009~LOADING MOTOR
VFK0499	Extension Cable (3P)	1	P6005~MODE SELECT SW
VFK0304	Y/C Separator	1	———
VFK0430	Extension Cable (14P)	1	P3502~VFKS0074
VFKS0074	Connector	1	Y/C Separator~VFK0430

Fig. S1

Connection Method of Extension Cables

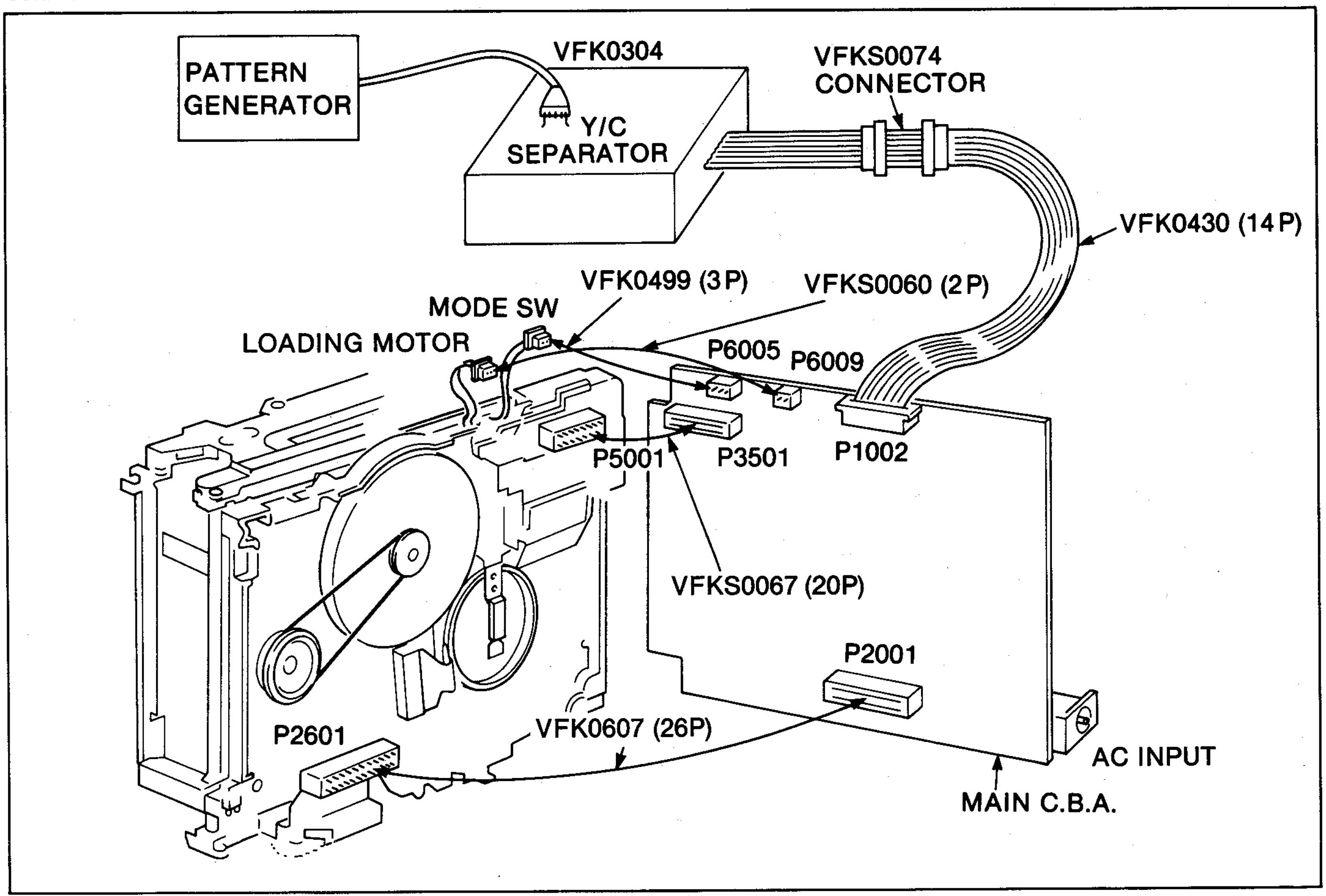

PATTERN GENERATOR
VFK0304
Y/C SEPARATOR
VFKS0074 CONNECTOR
VFK0430 (14P)
VFK0499 (3P)
VFKS0060 (2P)
MODE SW
LOADING MOTOR
P6005
P6009
P5001
P3501
P1002
VFKS0067 (20P)
P2001
P2601
VFK0607 (26P)
AC INPUT
MAIN C.B.A.

Fig. S2

2. Servicing the Camera Section

When servicing the camera section connection of extension cables and Diffusion Plate are necessary as shown in Fig. S3, S4.

Servicing Fixture (Camera Section)

PART NO.	PART NAME	PCS	CONNECTION
VFKS0051	Extension Cable (3P)	1	P704~ACTUATOR UNIT
VFKS0052	Extension Cable (6P)	1	P701~FOCUS & ZOOM SENSOR
VFK0503	Extension Cable (5P)	1	FP302~FP601
VFK0380	Extension Cable (18P)	1	B301~B201
VFK0497	Extension Cable (6P)	1	P703~FOCUS MOTOR & IRIS MOTOR
VKW1049	Diffusion Plate	1	———

Fig. S3

Connection Method of Extension Cables

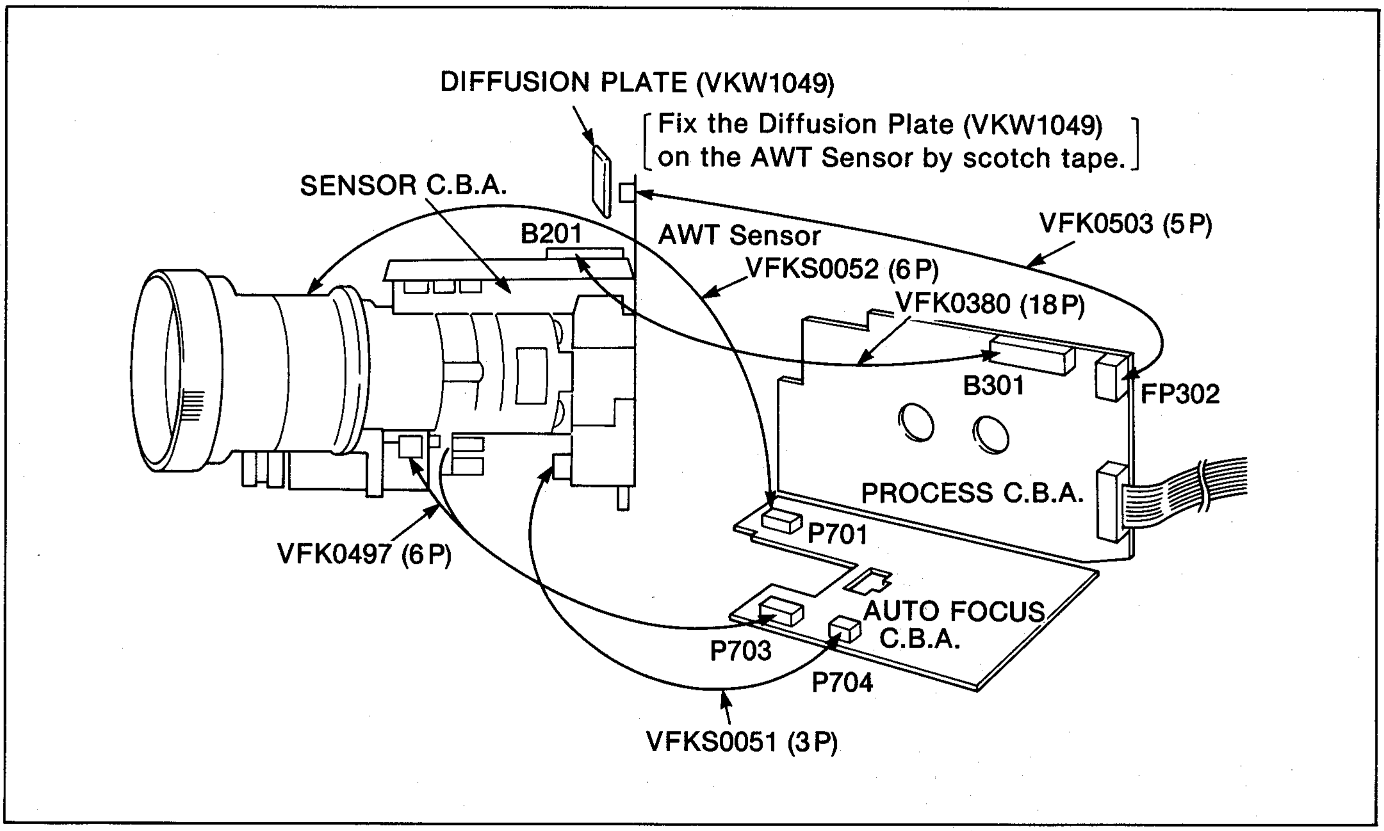

DIFFUSION PLATE (VKW1049)
Fix the Diffusion Plate (VKW1049) on the AWT Sensor by scotch tape.
SENSOR C.B.A.
B201
AWT Sensor
VFK0503 (5P)
VFKS0052 (6P)
VFK0380 (18P)
B301
FP302
PROCESS C.B.A.
P701
VFK0497 (6P)
AUTO FOCUS C.B.A.
P703
P704
VFKS0051 (3P)

Fig. S4

3. How To Use Camera Holder Arm (VFK0431)

This Camera Holder Arm which is adjustable the span must be mounted to VFK0382 (Camera Holder of NV–M5) and it can be used with VFK0432 for camera adjustments or checking.

(A) ––– VFK0432 Holder Spacer (2pcs.)
(B) ––– VFK0431 Camera Holder Arm
(C) ––– XSN26+18 Screw (2pcs.)
(D) ––– VFK0382 Camera Holder

1. Fix the Holder Arm (4) and (5) temporarily by screw (1) as shown in Fig.S5.
2. Mount the Camera Holder Arm (B) to the Camera Holder (D) by screws (2) and (3) as shown in Fig. S6.
3. Tightn the screws (C) with the Holder Spacers (A) as shown in Fig. S5.

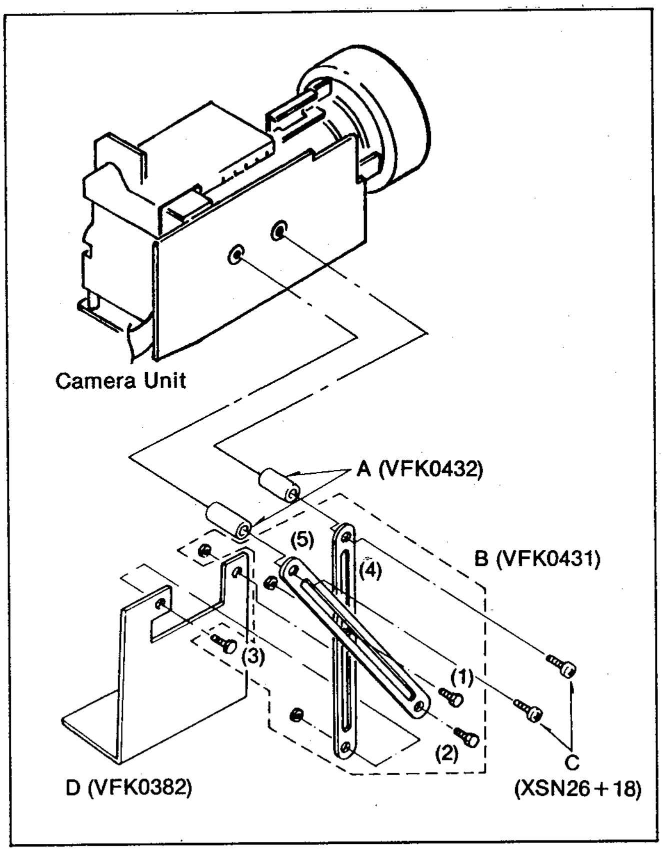

Camera Unit
A (VFK0432)
(5)
(4)
B (VFK0431)
(3)
(1)
(2)
D (VFK0382)
C
(XSN26+18)

Fig. S5

4. How To Connect the Y/C Separator and Y/C Separator Connection Cable

When the Y/C Separator Connection Cable (VFKS0074) is used to connect to Y/C Separator the caution should be paid the following items:

*Cut off the marked portion of Y/C Separator output connector as shown in Fig.S7

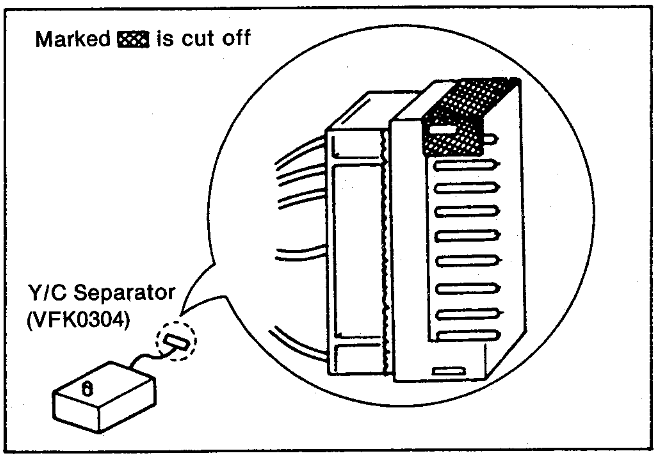

Marked ▨ is cut off
Y/C Separator
(VFK0304)

Fig. S7

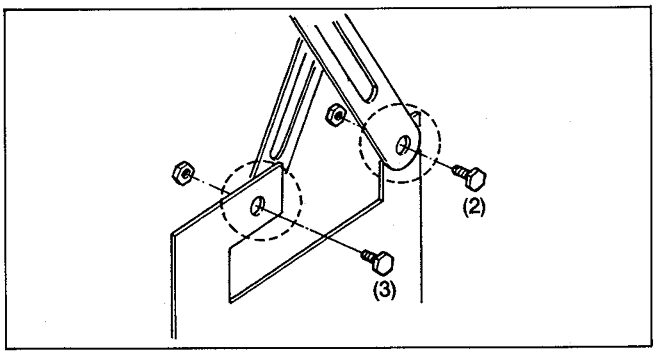


Fig. S8

5. Modification of Y/C Separator (VFK0304) for SECAM System.

(1) Remove the 2 screw (A) and take out the Bottom case.
(2) Cut the Separator C.B.A. Foil at B portion as shown in Fig. S10
(3) Add the modification component on Separator C.B.A. as shown in Fig. S10.

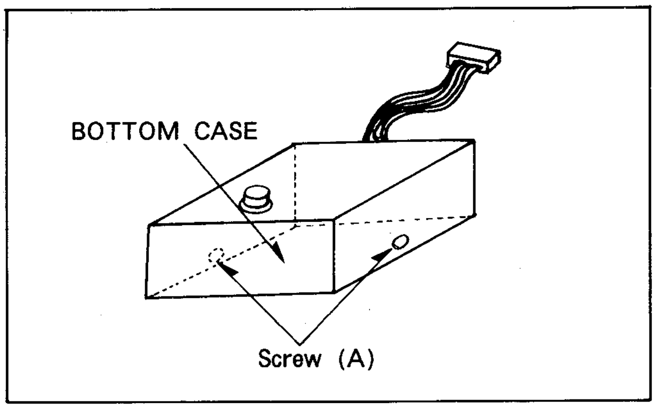
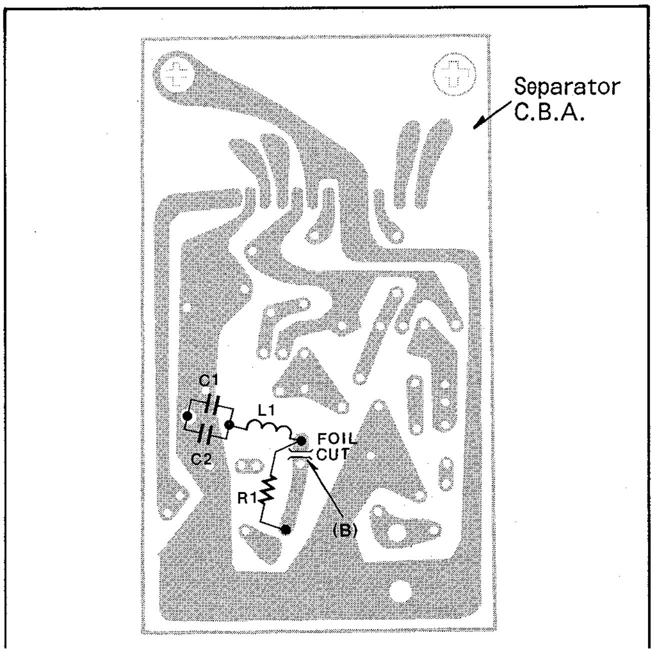

BOTTOM CASE
Screw (A)

Fig. S9


Separator
C.B.A.
C1
L1
FOIL
CUT
C2
R1
(B)

C1...	ECCF1H390J	(39pF)
C2...	ECCF1H030C	(3pF)
L1...	VLQEL05F330K	(33uH)
R1...	ERDS2TJ102	(1Kohm)

Fig. S10

6. Set Tracking Control to the Fixed position

If the Tracking Control is required to be in the fixed (neutral) position, push both of the tracking Control Up/Down Switchs, on the Main C.B.A., in at the same time in Playback Mode.

7. Manual Eject–Tape in and Carrinage closed

1. Remove Cassette Cover by removing 2 Screws.
2. Push on upper end of Lock Lever to release cassette carriage.

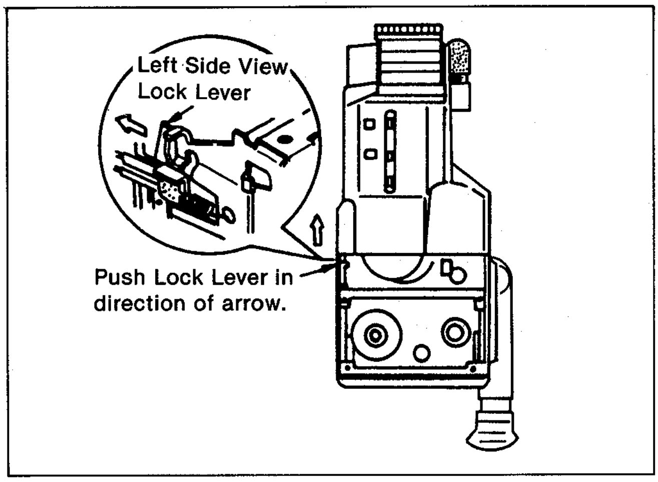


Fig. S11

8. Elmination of Tape slack

Before inserting the Cassette Tape in the VHS–C Movie, take up slack in the tape by turning the Takeup Tape Gear on the side of the Cassette Tape. Turn it in the direction of the arrow until no slack is evident and opposite reel begins to turn.

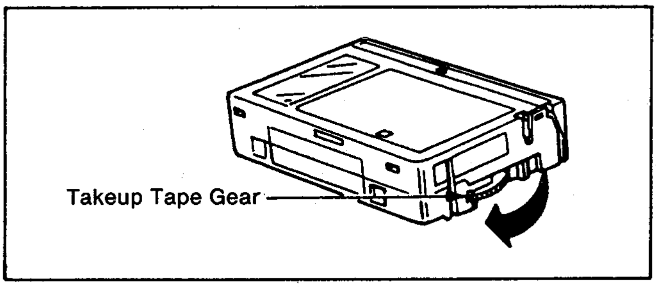


Fig. S12

9. Insertion (or Removal) of Cassette Tape

As in Fig. S13, hold the tape vertically with fingers and thumb to insert or remove the tape. (Be sure to eliminate slack before inserting the tape.)

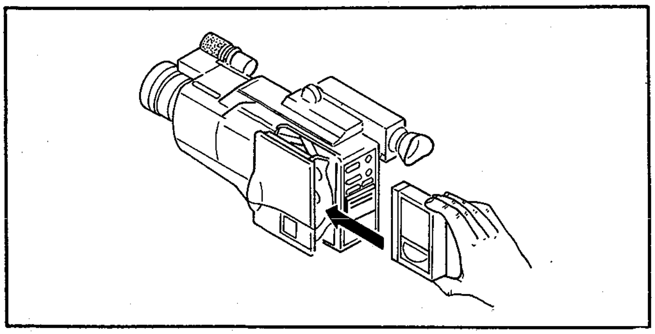


Fig. S13

10. Connection of the Flexible Cables to Trap Connectors

a. Removal

1. On the trap Connector, pull out on both ends of the Locking Tab Surrounding the cable end to release the Trap on the Connector. Then pull Flexible Cable out to remove as shown in Fig. S14.

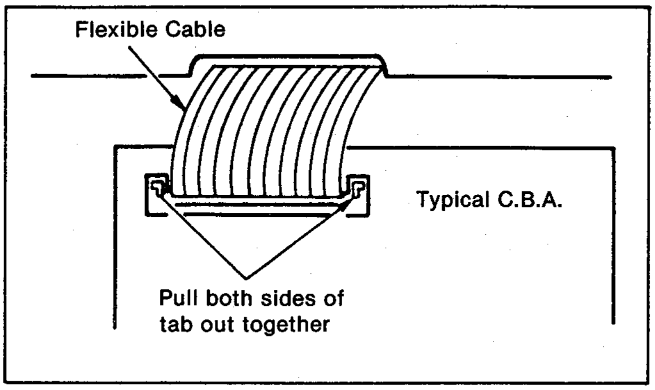


Fig. S14

b. Installation

1. Insert the end of the Flexible Cable into the Trap Connector so it lays smoothly across the slot.
2. Press the middle of the cable firmly against the Trap Connector slot, and hold it securly.
3. Without pinching the Cable, press the Locking Tabs in against the Trap Connector until both ends snap into their locked positions.
4. Pull lightly on the Cable to check for positive connection.

Note:
1. Take care when removing or installing the Flexible Cable to prevent Cable damage.

11. Service of Operation Bracket Unit

When removing and reinstalling the Operation Bracket Unit and Switch Cover, first, install the Switch Cover over the Operation Key portion (CAMERA MODE) of the Operation Bracket Unit, and then install assembly parts.

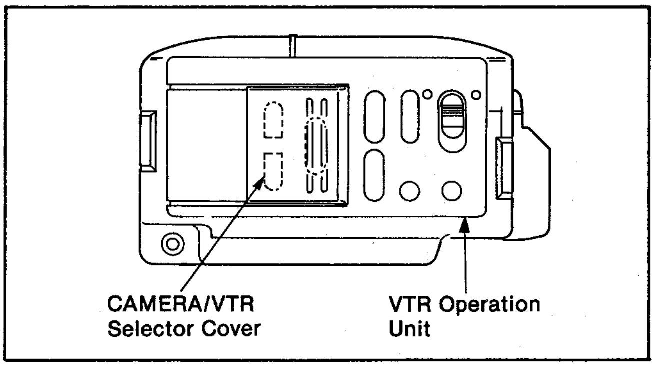


Fig. S15

SERVICE INFORMATION

1-1.HOW TO CHECK THE CRACKED CHIP PART

(1) Apply heat to the soldered portions of chip part using a soldering iron for about 2–3 seconds.
(2) If the chip part is faulty,it will be broken or cracked.

Caution: Do not leave soldering iron on the PCB too long as damage may occur to the PCB or the chip parts.

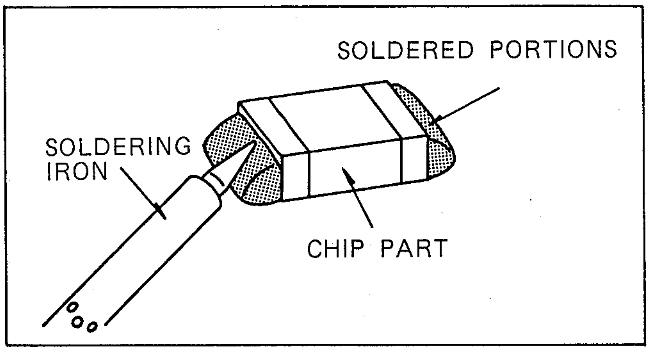

SOLDERED PORTIONS
SOLDERING IRON
CHIP PART

FIG. G1

Note: Regarding intermittent faults
The main causes of these faults are poor soldering and cracked chip parts.

1-2.HOW TO REPLACE THE CHIP PART

1) REMOVAL (RESISTOR, CAPACITOR, etc...)

(1) Presolder the one side of soldering portion for chip part and grasp the chip part by tweezers.

(2) Melt the presoldered portion. And then remove the chip part with a twisting motion while melting the soldering portion of another side quickly.

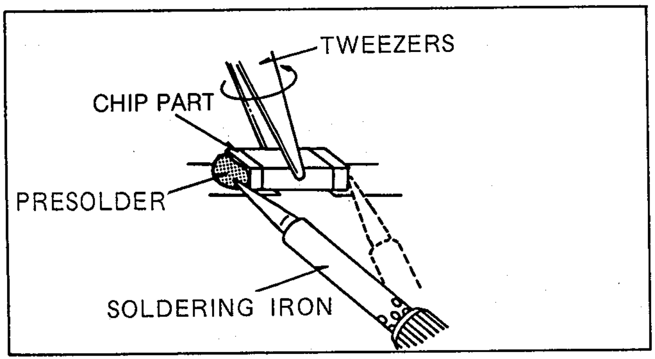

TWEEZERS
CHIP PART
PRESOLDER
SOLDERING IRON

FIG. G2

2) REMOVAL (transistor, diode, etc...)

(1) Grasp the chip part with tweezers and melt the solder of one lead.

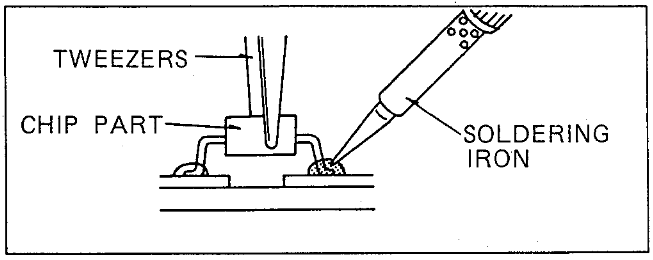

TWEEZERS
CHIP PART
SOLDERING IRON

FIG. G3

(2) Lift the side of that lead upward.

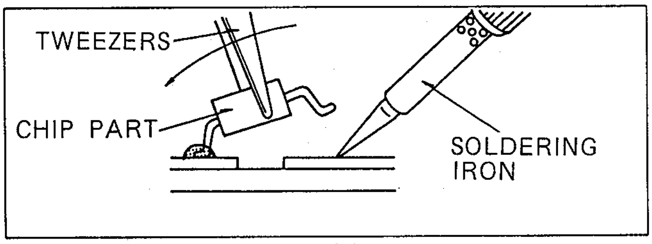

TWEEZERS
CHIP PART
SOLDERING IRON

FIG. G4

Caution: Do not lift the chip part too high as damage may occur to the PCB or the leads that are still soldered on the PCB.

(3) Simultaneously heat the solder of the two remaining leads and lift part to remove.

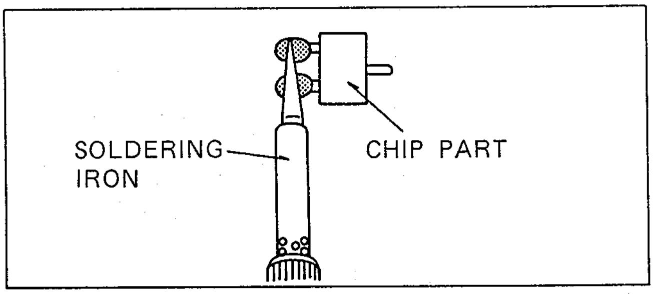

SOLDERING IRON
CHIP PART

FIG. G5

3) INSTALLATION

(1) Presolder the one side of contact point on the circuit board.

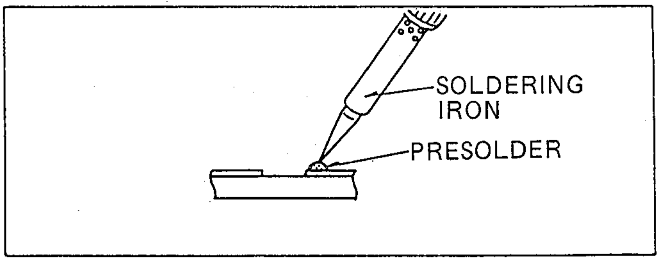

SOLDERING IRON
PRESOLDER

FIG. G6

(2) To install the chip part,hold in position using tweezers, apply heat to the pre-soldered portions using a fine tip soldering iron.
(3) Solder the other side of the chip part.
(4) Check your soldering.

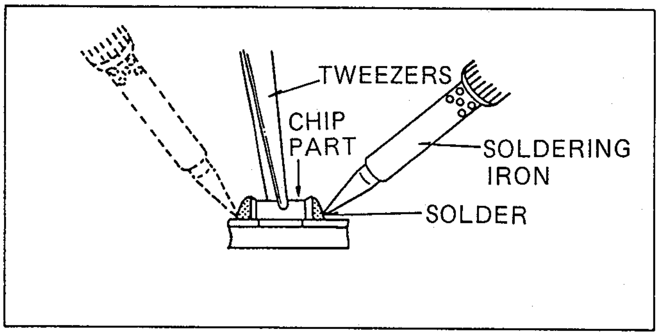

TWEEZERS
CHIP PART
SOLDERING IRON
SOLDER

FIG. G7

1-3.HOW TO REMOVE THE FLAT-IC

(WITH HOT-AIR FLAT-IC DESOLDERING MACHINE)

(FOR EXAMPLE)

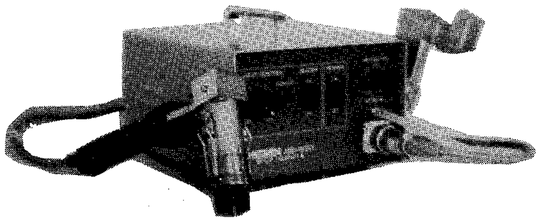


FIG. G8

(1) Prepare the HOT-AIR FLAT-IC DESOLDERING MACHINE. And then apply hot air to FLAT-IC about 5 ~ 8 seconds.

(2) Remove the FLAT-IC with tweezers while applying the hot air.

Caution: Do not supply the hot air to the chip parts around the Flat-IC for long time as as damage may occur to the chip parts around the Flat -IC.

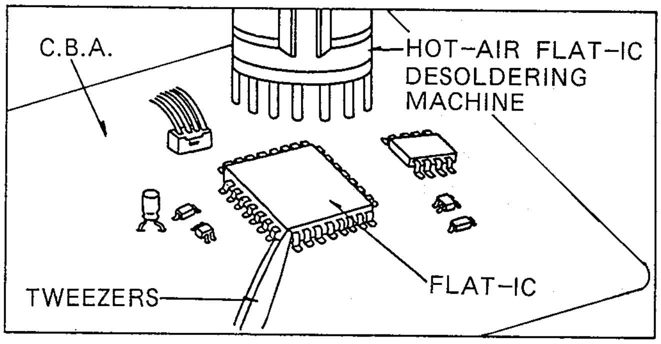

C.B.A.
HOT-AIR FLAT-IC DESOLDERING MACHINE
TWEEZERS
FLAT-IC

FIG. G9

(WITH SOLDERING IRON)

(1) Using solder braid remove the solder from all pins of the Flat-IC.
When you use the solder flux which is applied to all pins of the Flat-IC,you can remove it easily.

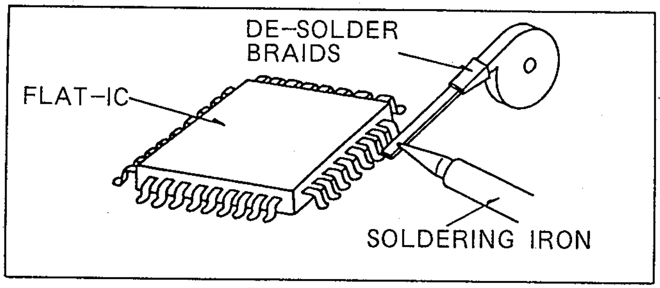

DE-SOLDER BRAIDS
FLAT-IC
SOLDERING IRON

FIG. G10

(2) Lift each lead of the Flat-IC upward one by one using a sharp pin or non solder wire(iron wire),while heating the pins using a fine tip soldering iron or a hot air blower.

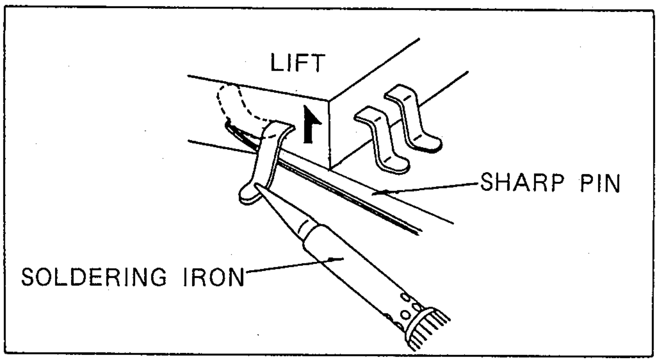

LIFT
SHARP PIN
SOLDERING IRON

FIG. G11

(WITH IRON WIRE)

(1) Affix the wire to workbench or solid mounting point as shown in FIG.G12.
(2) Pull up wire as the solder melts so as to lift the IC lead from the PCB contact pad,while heating the pins using a fine tip soldering iron or hot air blower.

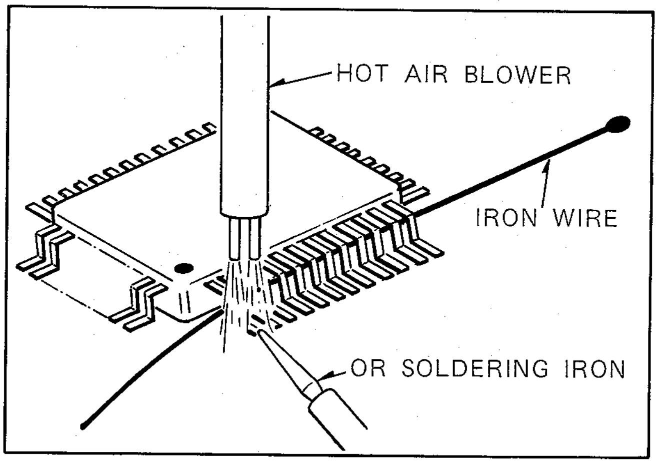
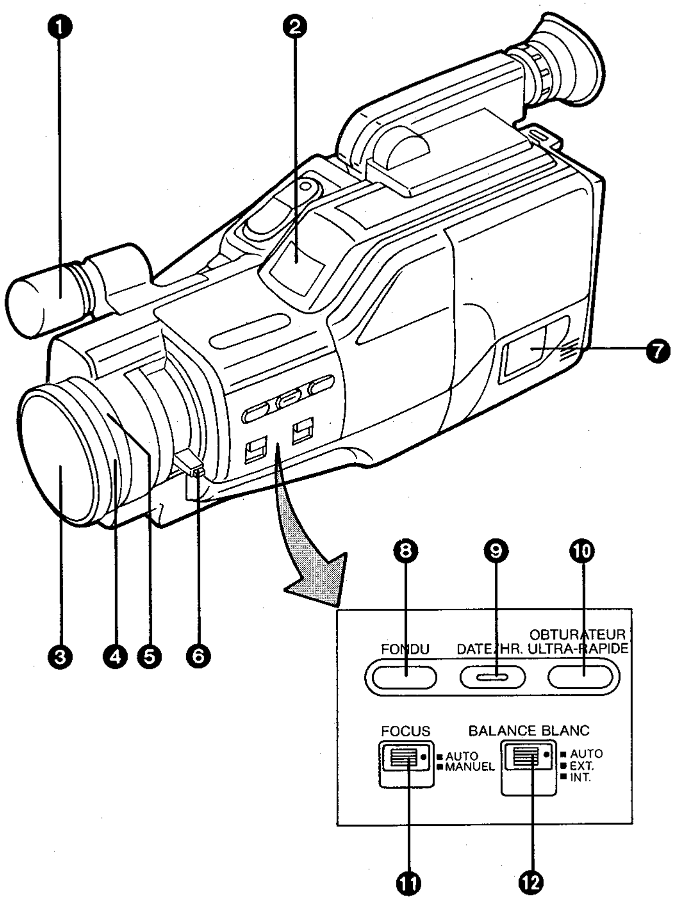

HOT AIR BLOWER
IRON WIRE
OR SOLDERING IRON

FIG.G12

Note: When using a soldering iron care must be taken to ensure that the Flat IC is not being held by glue before it is the PCB may be damaged if force is used.

SECTION 1
GENERAL DESCRIPTION

1-1. CONTROLS AND COMPONENTS



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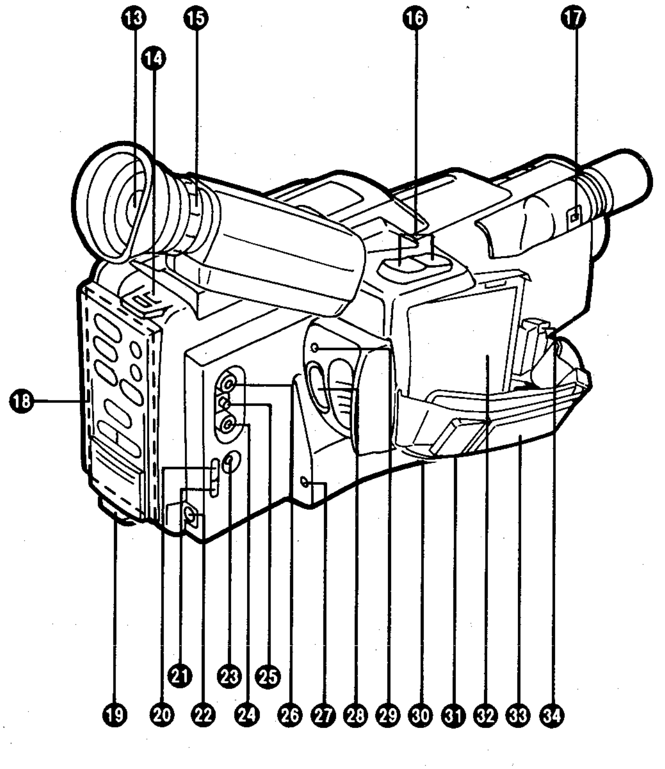
FONDU
DATE/HR.
OBTURATEUR ULTRA-RAPIDE
FOCUS
AUTO
MANUEL
BALANCE BLANC
AUTO
EXT.
INT.
⓫
⓬



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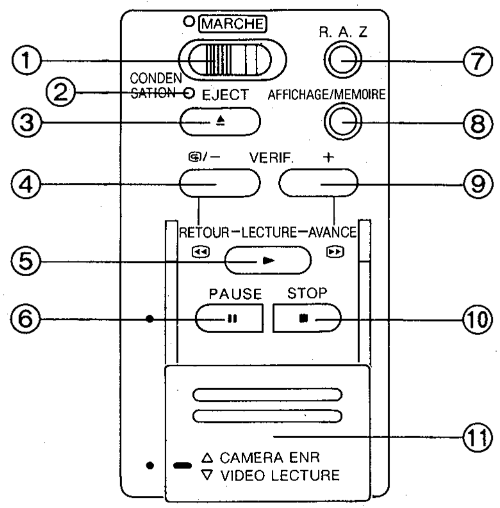
- ❶ Microphone incorporé
- ❷ Fenêtre d'analyse de la balance du blanc
- ❸ Capuchon de l'objectif
- ❹ Pare-soleil
- ❺ Bague de mise au point
- ❻ Commande manuelle du zoom avec touche de fonction macro
- ❼ Logement de la cassette
- ❽ Touche d'ouverture/fermeture en fondu (FONDU)
- ❾ Sélecteur date/heure (DATE/HR.)
- ❿ Sélecteur de l'obturateur ultra-rapide (OBTURATEUR ULTRA-RAPIDE)
- ⓫ Sélecteur de mode de réglage de la mise au point (FOCUS)
- ⓬ Sélecteur de mode de réglage de la balance du blanc (BALANCE BLANC)
- ⓭ Viseur électronique
- ⓮ Attache de bretelle
- ⓯ Commande de réglage de l'oculaire
- ⓰ Commandes de l'objectif zoom assisté
- ⓱ Sélecteur de sensibilité du microphone
- ⓲ Commandes générales



MARCHE
R. A. Z
CONDENSATION
EJECT
AFFICHAGE/MEMOIRE
VERIF.
+
RETOUR–LECTURE–AVANCE
PAUSE
STOP
△ CAMERA ENR
▽ VIDEO LECTURE
①
②
③
④
⑤
⑥
⑦
⑧
⑨
⑩
⑪

- ① Interrupteur marche/arrêt (MARCHE)
- ② Témoin de condensation (CONDENSATION)
- ③ Touche d'éjection (EJECT)
- ④ Touche de rebobinage/repérage arrière (RETOUR)
- ⑤ Touche de lecture (LECTURE)
- ⑥ Touche de pause (PAUSE)
- ⑦ Touche de remise à zéro (R.A.Z)
- ⑧ Touche d'affichage/mémoire (AFFICHAGE/MEMOIRE)
- ⑨ Touche de bobinage/repérage avant (AVANCE)
- ⑩ Touche d'arrêt (STOP)

⑪ Couvercle de sélection caméra/magnétoscope

Fonction du couvercle de sélection caméra/magnétoscope

Fermé	Pour les enregistrements à la caméra.
Ouvert (comme illustré)	Pour les opérations autres que les enregistrements à la caméra.

⑲ Attache de bretelle

⑳ Touche d'alignement haut/réglage de la date

㉑ Touche d'alignement bas/déplacement des chiffres

㉒ Prise d'entrée courant continu

㉓ Prise de télécommande

㉔ Prise de sortie audio

㉕ Prise de sortie courant continu HF

㉖ Prise de sortie vidéo

㉗ Prise écouteur

㉘ Touche de marche/arrêt

㉙ Témoin d'enregistrement extérieur

㉚ Logement des piles de sauvegarde de la date et de l'heure

㉛ Douille du trépied

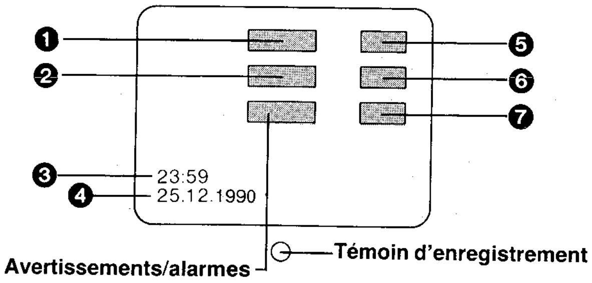
㉜ Logement du bloc-batterie

㉝ Courroie de poignée

㉞ Levier de verrouillage

1-2. ELECTRICAL VIEWFINDER

Les indications suivantes apparaîssent dans le viseur électronique pour vous renseigner sur les conditions de fonctionnement de la VHS-C Movie.



BATT	La batterie est presque épuisée. La VHS-C Movie s'arrêtera dans quelques minutes. Remplacer le bloc-batterie.
BANDE	L'enregistrement est impossible parce que la languette de protection contre l'effacement de la cassette n'est plus intacte.
FIN	La fin de la bande est pratiquement atteinte (pendant l'enregistrement). Changer de cassette. Cette indication reste allumée en fin de bande.
HUM	L'indication "HUM" clignote dans le viseur électronique lorsque de la condensation se forme dans la VHS-C Movie. Celle-ci s'arrête automatiquement quelques secondes plus tard pour protéger la bande et les têtes vidéo.
⊗	Les têtes vidéo sont colmatées

❶ **Témoin de charge de la batterie**

V---P	Les indications "▬" disparaissent de droite à gauche au fur et à mesure que la puissance du bloc-batterie diminue.

❷ **Indications du compteur**

M0123	Compteur de bande
1:23	Compteur horaire

❸ **Indications de l'heure**

❹ **Indications de la date**

❺ **Indications des modes de défilement de la bande**

ENR	Mode enregistrement
PAUSE	Mode pause d'enregistrement; vérification de l'enregistrement.
▷	Mode lecture; recherche sur la caméra (en avant.)
❚❚	Mode arrêt sur image.
▷▷	Mode bobinage; repérage avant.
◁◁	Mode rebobinage/repérage arrière; recherche sur la caméra (en arrière).

❻ **Témoin du réglage manuel de la balance des blancs**

EXT	EXTERIEUR
INT	INTERIEUR

❼ **Mode obturateur ultra-rapide**

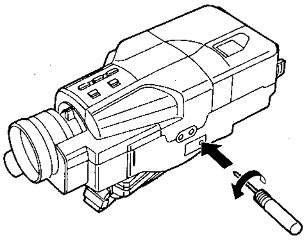
1/500	1/500 s.
1/1000	1/1000 s.

- Certainesdes indications ci-dessus pourront s'allumer alternativement en un même point du viseur électronique pour avertir l'utilisateur ou confirmer certaines conditions de fonctionnement.

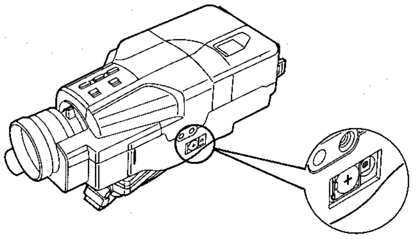
1-3. SETTING OF THE DATE AND CKOCK & RECORDING THE DATE/CLOCK INDECATIONS

Insertion de la pile d'alimentation de l'horloge

❶ Enlever le couvercle à la base de la VHS-C Movie à l'aide d'un tournevis.



❷ Installer la pile de format "LR1130" dans le compartiment en tenant compte de la polarité (⊕ et ⊖) et replacer le couvercle.
- L'horloge commence à fonctionner aussitôt que la pile est en place.



Une pile de format "LR1130" (fournie) est nécessaire pour alimenter l'horloge incorporée et pour souvegarder la date/heure quand la VHS-C Movie est éteinte.

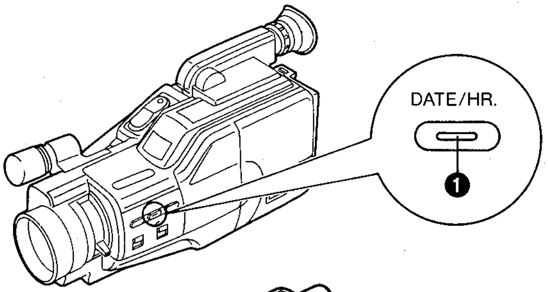
Remarques

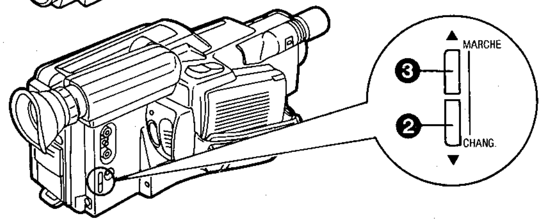
- Lorsque la pile sera presque complètement déchargée, l'indication complète de l'heure et de la date clignotera.
- Lorsque cette pile sera complètement déchargée, l'indication "METTRE LA BATTERIE" apparaîtra.
- Appuyer deux fois sur le sélecteur DATE/HR. pour que cette indication disparaisse.
- Si cette indication est encore affichée quand la pile a été remplacée, mettre la VHS-C Movie hors-circuit puis de nouveau en circuit.

REMARQUES RELATIVES AU CHANGEMENT DE LA PILE

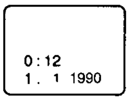
- L'autonomie de la pile est d'environ une année, ce délai étant fonction de la fréquence d'utilisation. Vérifier la pile une fois par an et la remplacer si nécessaire.
- Insérer la pile neuve en respectant la polarité ⊕ et ⊖.
- Ne pas chauffer les piles usées car des courts-circuits internes peuvent se produire.
- Retirer immédiatement les piles usées, et les jeter.

Réglage de la date et de l'heure




MARCHE
❸
❷
CHANG.

❶ Lorsque l'on appuie sur le sélecteur DATE/HR., l'indication ci-contre apparaît dans le viseur électronique.



- S'il n'y a pas de pile, l'indication "METTRE LA BATTERIE" s'allume.

❷ Lorsque l'on appuie et que l'on garde appuyée la touche CHANG., l'indication "année" commence à clignoter. Puis, à chaque nouvelle pression sur cette touche, les indications à régler changent dans l'ordre suivant:

Année→Mois→Jour→Heures→Minutes

❸ Appuyer sur la touche MARCHE jusqu'à ce que la partie à regler clignote:

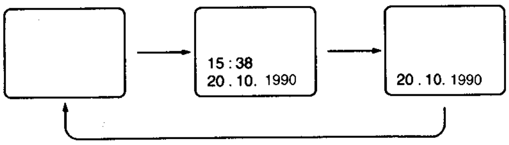
Année: 1990→1991→ .... →2089
Mois: 1→2→ .... →12
Jour: 1→2→ .... →28→(29)→(30)→(31)
Heures: 0→1→ .... →23
Minutes: 00→01→ .... →59

- Répéter les opérations ❷ et ❸ ci-dessus jusqu'à ce que les cinq indications de temps soient réglées.
- La date et l'heure étant réglées, appuyer sur la touche CHANG. en prenant un repère de temps précis pour faire démarrer l'horloge à l'heure exacte.

Pour mémoriser la date/l'heure

Lorsque l'on appuie de façon répétée sur le sélecteur DATE/HR., l'indication affichée change dans l'ordre suivant:

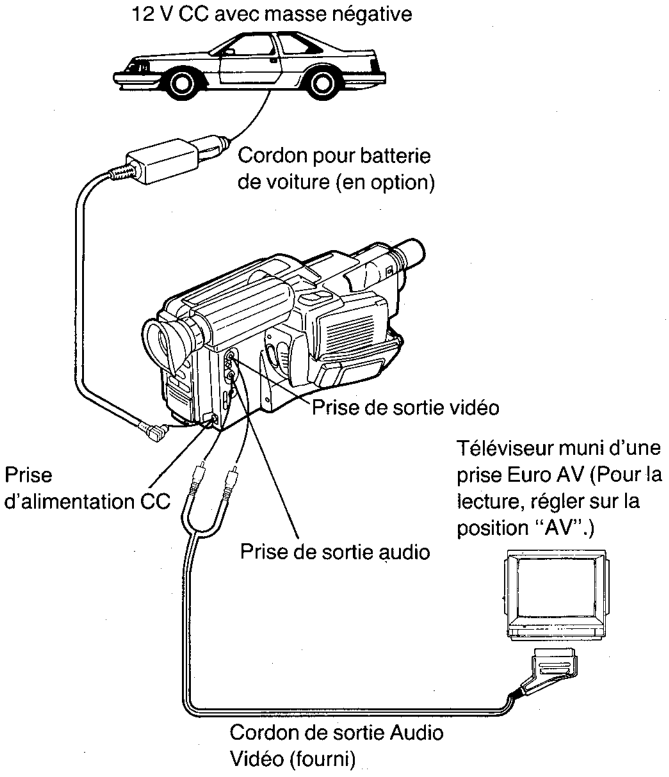
Pour n'enregistrer ni la date ni l'heure:	Pour enregistrer la date et l'heure:	Pour enregistrer seulement la date:


15:38
20.10. 1990
20.10. 1990

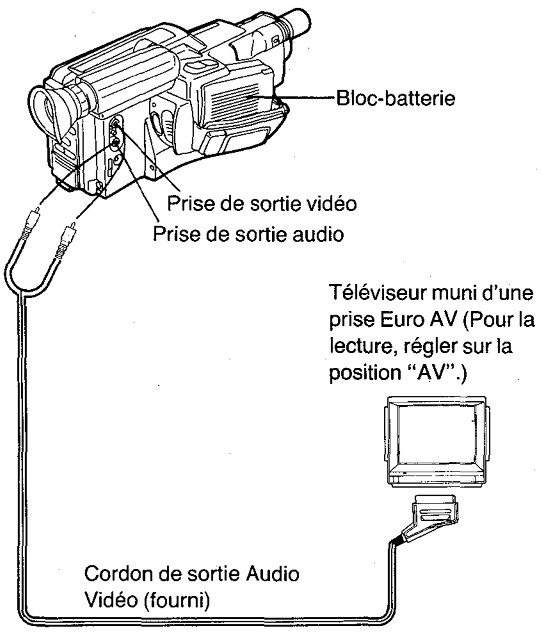
1-4. CABLE CONNECTION

Branchement sur un téléviseur avec prises d'entrée vidéo/audio

Alimentation de la VHS-C Movie par l'intermédiaire d'un cordon pour batterie de voiture


12 V CC avec masse négative
Cordon pour batterie de voiture (en option)
Prise de sortie vidéo
Téléviseur muni d'une prise Euro AV (Pour la lecture, régler sur la position "AV".)
Prise d'alimentation CC
Prise de sortie audio
Cordon de sortie Audio Vidéo (fourni)

Alimentation de la VHS-C Movie par le bloc-batterie


Bloc-batterie
Prise de sortie vidéo
Prise de sortie audio
Téléviseur muni d'une prise Euro AV (Pour la lecture, régler sur la position "AV".)
Cordon de sortie Audio Vidéo (fourni)

1-5. VHS-C MOVIE SYSTEM ACCESSORIES

Fourni

Adaptateur CA
Bloc-batterie
Bretelle
Cordon de sortie Audio Vidéo
Pile pour le fonctionnement de l'horloge
Cordon d'entrée CC

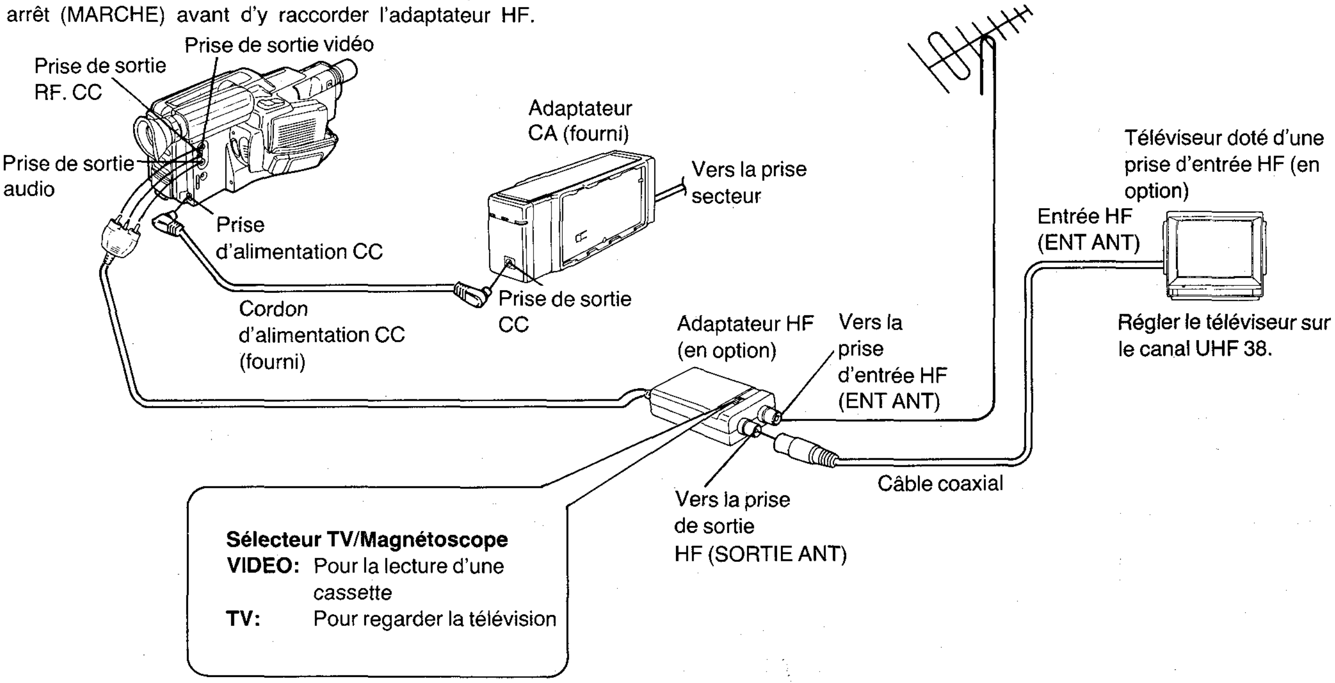
En option

Télécommande de pause (VW-RM1)
Cordon pour batterie de voiture (VW-ACC5)
Etui souple (VW-CB10E)
Adaptateur de cassette (VW-TCA7E)
Adaptateur HF (VW-RF7F)
Poignée (VW-GPC1E)

Branchement sur un téléviseur sans prises d'entrée vidéo/audio

L'adaptateur CA et l'adaptateur HF sont nécessaires

Mettre la VHS-C Movie hors circuit avec l'interrupteur de marche/arrêt (MARCHE) avant d'y raccorder l'adaptateur HF.


Prise de sortie vidéo
Prise de sortie RF. CC
Prise de sortie audio
Prise d'alimentation CC
Adaptateur CA (fourni)
Vers la prise secteur
Prise de sortie CC
Cordon d'alimentation CC (fourni)
Adaptateur HF (en option)
Vers la prise d'entrée HF (ENT ANT)
Vers la prise de sortie HF (SORTIE ANT)
Câble coaxial
Téléviseur doté d'une prise d'entrée HF (en option)
Entrée HF (ENT ANT)
Régler le téléviseur sur le canal UHF 38.

Sélecteur TV/Magnétoscope
VIDEO: Pour la lecture d'une cassette
TV: Pour regarder la télévision

Remarque: N'utiliser que l'adaptateur spécifié pour faire ces branchements.
La VHS-C Movie ne peut être utilisée pour l'enregistrement des programmes télévisés.

SECTION 2
ADJUSTMENT PROCEDURES

2-1. DISASSEMBLY PROCEDURES

2-1-1. DISASSEMBLY FLOW CHART

This flow chart indicates disassembly steps for the cabinet parts and the P.C.boards in order to find the items necesssary for servicing.
When reassembling perform the steps in the reverse order.

Note:
(1) When removing the cabinet, work with care so as not to break the locking tabs.
(2) Place a cloth or some other soft material under the P.C.Boards or Unit to prevent damage.
(3) When re-installing, ensure that the connectors are connected and electrical components have not been damaged.
(4) Do not supply power to the Unit during disassembly.

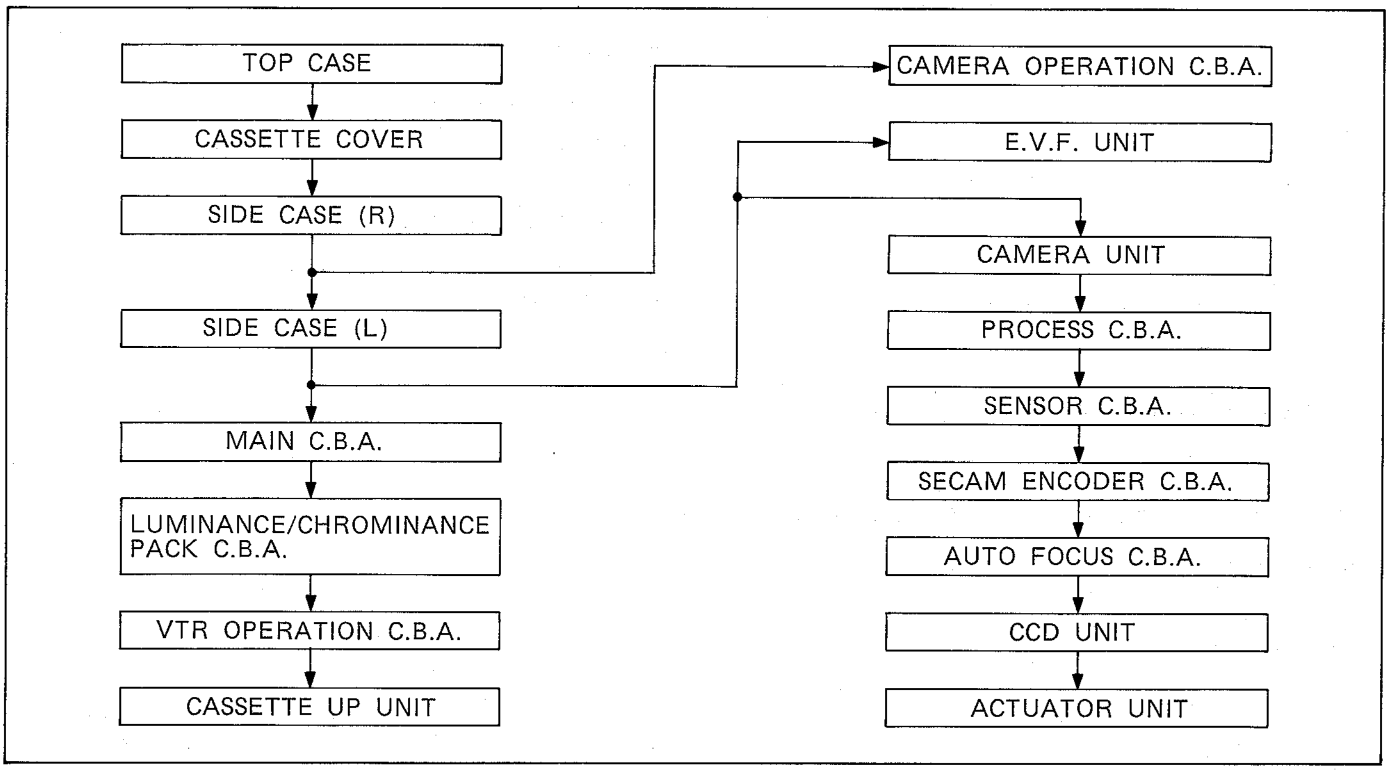

TOP CASE
CASSETTE COVER
SIDE CASE (R)
SIDE CASE (L)
MAIN C.B.A.
LUMINANCE/CHROMINANCE PACK C.B.A.
VTR OPERATION C.B.A.
CASSETTE UP UNIT
CAMERA OPERATION C.B.A.
E.V.F. UNIT
CAMERA UNIT
PROCESS C.B.A.
SENSOR C.B.A.
SECAM ENCODER C.B.A.
AUTO FOCUS C.B.A.
CCD UNIT
ACTUATOR UNIT

Fig. D1

2-1-2. VTR SECTION

1. Removal of Top Case

(1) Remove 3screws (A).
(2) Lift the Top Case from rear side.

2. Removal of Cassette Cover

(1) Remove 2 screws (B).
(2) Slide the cassette cover to as shown in Fig.D2.

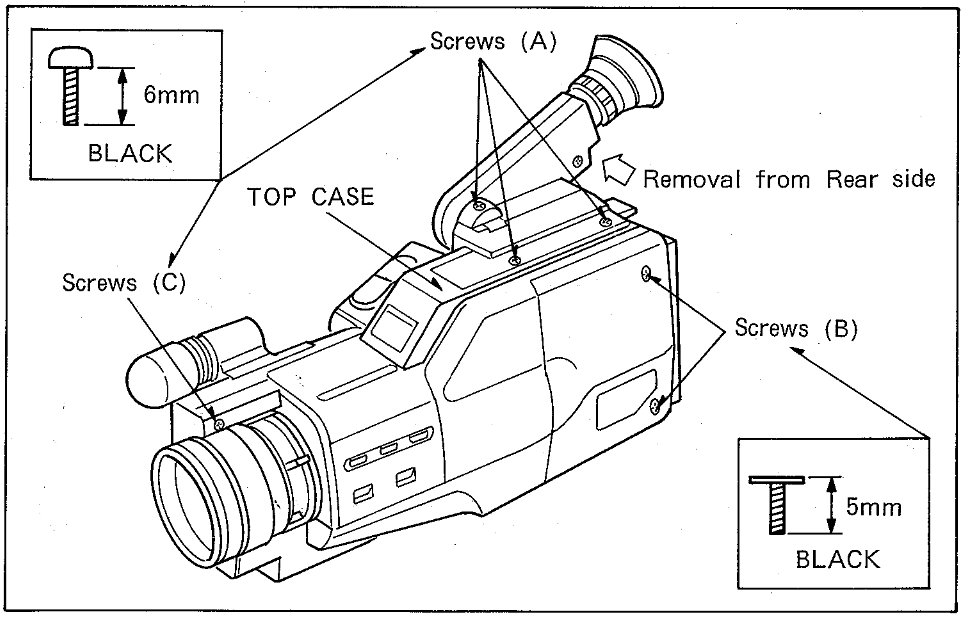

6mm
BLACK
Screws (A)
Removal from Rear side
TOP CASE
Screws (C)
Screws (B)
5mm
BLACK

Fig. D2

3. Removal of Side Case (R)

(1) Remove screw (C) as shown in Fig. D2 and 4 screws (D).
(2) Dicsonnect the connector P001, P002 and FP001 on camera operation C.B.A.
(3) Remove the side case (R).

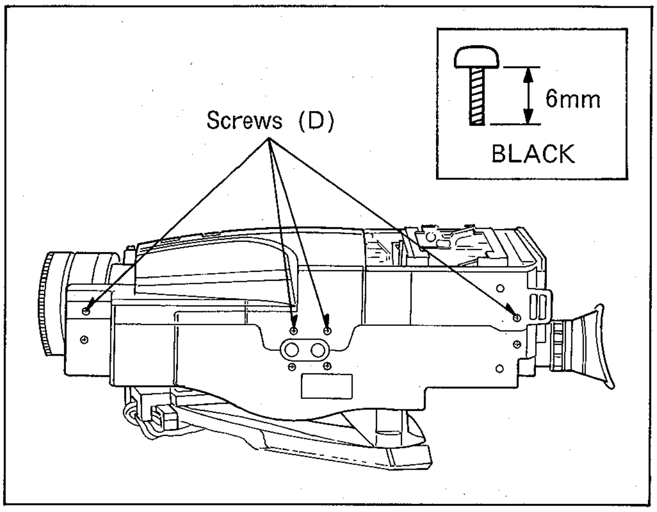

Screws (D)
6mm
BLACK

Fig. D3

4. Removal of Side Case (L)

(1) Remove 4 screw (E) as shown in Fig. D4 and 3 screws (F) as shown in Fig. D6.

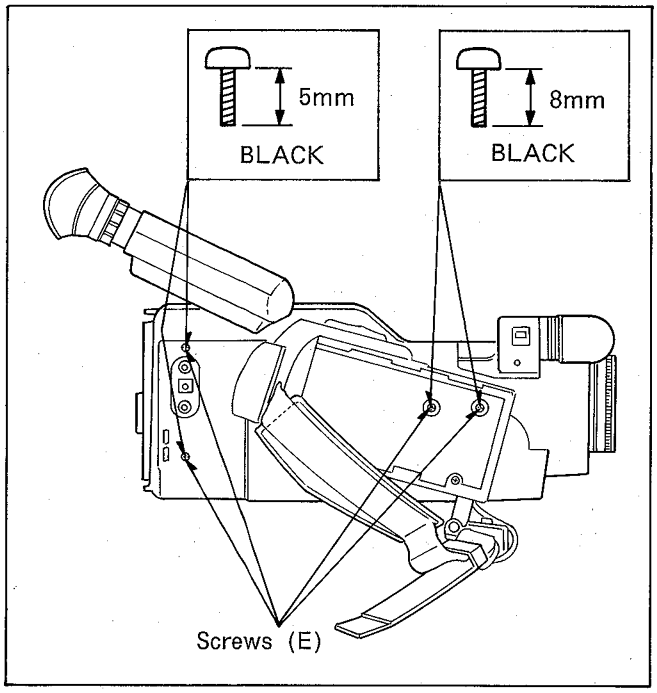

5mm
BLACK
8mm
BLACK
Screws (E)

Fig. D4

(2) Remove the side case (L) slightly.
(3) Disconnect the connector P307 on Process C.B.A.

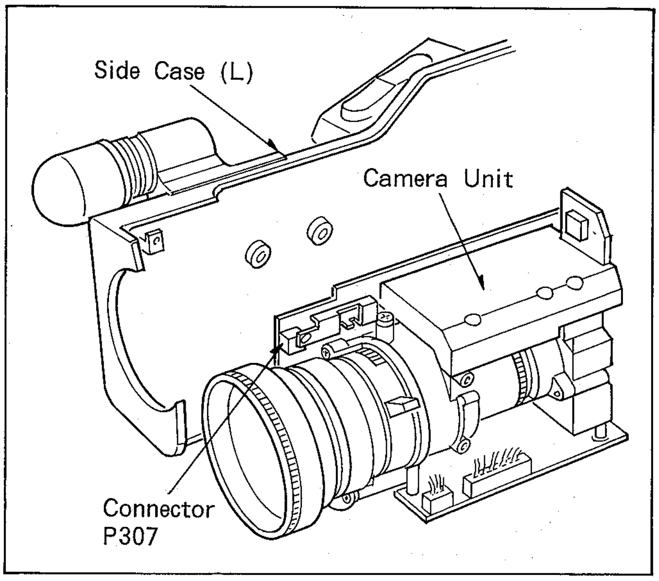

Side Case (L)
Camera Unit
Connector
P307

Fig. D5

(4) Disconnect the Flexible card P1002 on Main C.B.A., P4004 (From Battery Terminal), P1001 (From Battery Terminal), P4001 (From MIC unit) and P6012 (From E.V.F unit).
(5) Remove the side case (R).

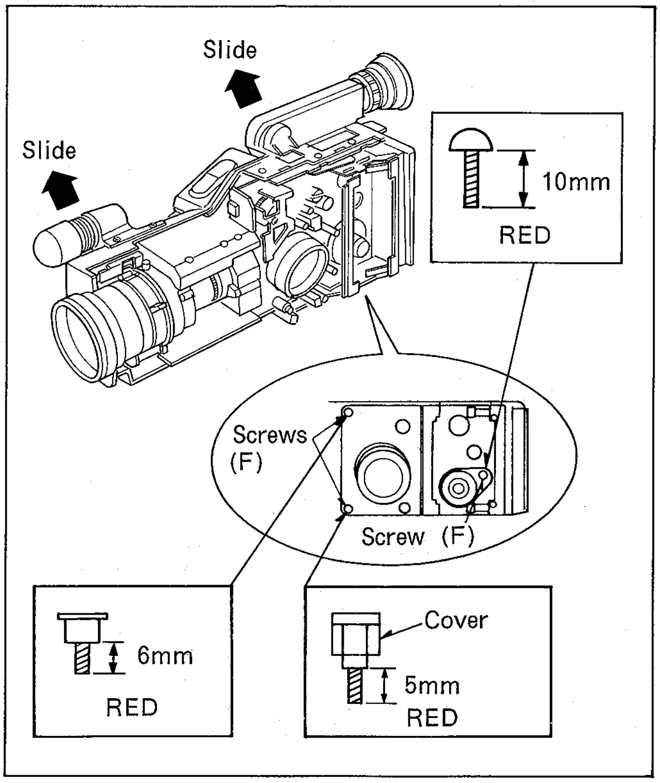

Slide
Slide
10mm
RED
Screws
(F)
Screw (F)
6mm
RED
Cover
5mm
RED

Fig. D6

5. Removal of E.V.F. Unit

(1) Remove 2screws (G) to remove.

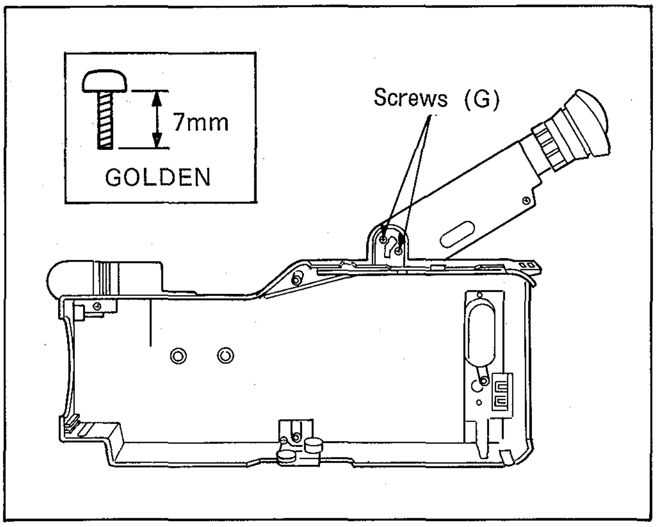

7mm
GOLDEN
Screws (G)

Fig. D7

6. Removal of Main C.B.A.

(1) Remove screw (H) to remove the Main C.B.A.
(2) Disconnect the connectors P6005, P6009, P3501 and P2001.

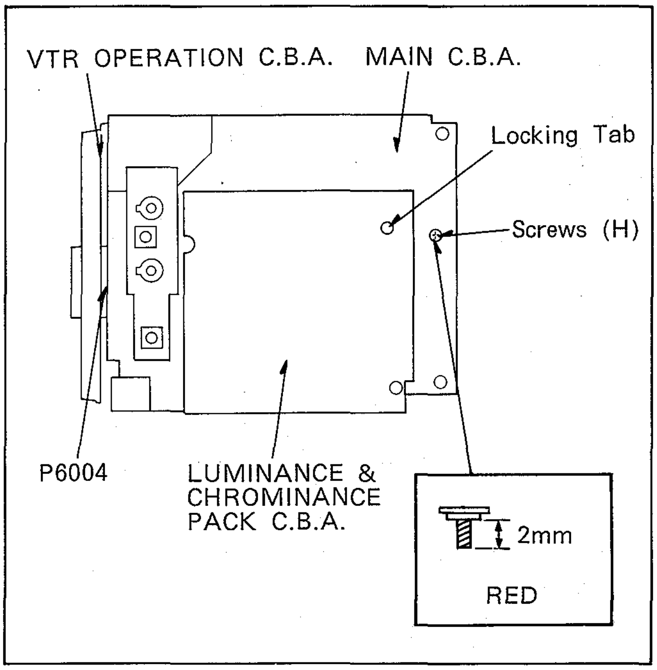

VTR OPERATION C.B.A.
MAIN C.B.A.
Locking Tab
Screws (H)
P6004
LUMINANCE & CHROMINANCE PACK C.B.A.
2mm
RED

Fig. D8

7. Removal of Luminance & Chrominance Pack C.B.A.

(1) Unlock locking tab to lift it up.
(2) Remove the Luminance & Chrominance Pack C.B.A.

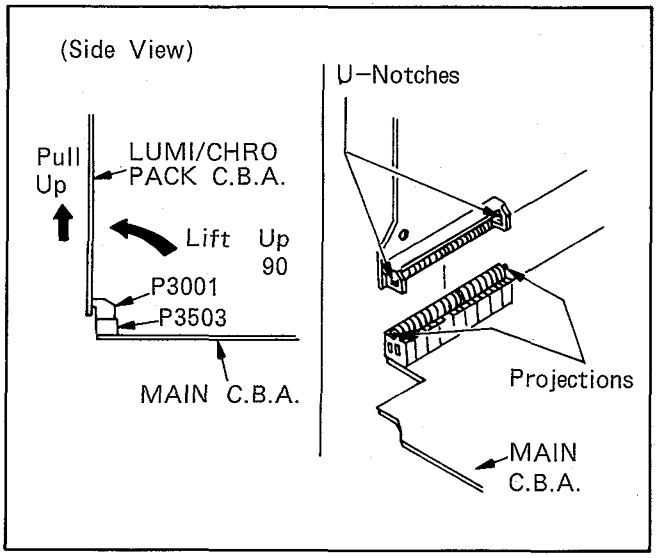

(Side View)
Pull Up
LUMI/CHRO PACK C.B.A.
Lift Up 90
P3001
P3503
MAIN C.B.A.
U-Notches
Projections
MAIN C.B.A.

Fig. D9

8. Removal of VTR Operation C.B.A.

(1) Disconnect the connector P6004 to remove, VTR Opearation C.B.A.

9. Removal of Camera Operation C.B.A.

(1) Remove 5 screws (I) to remove Camera Operation C.B.A.

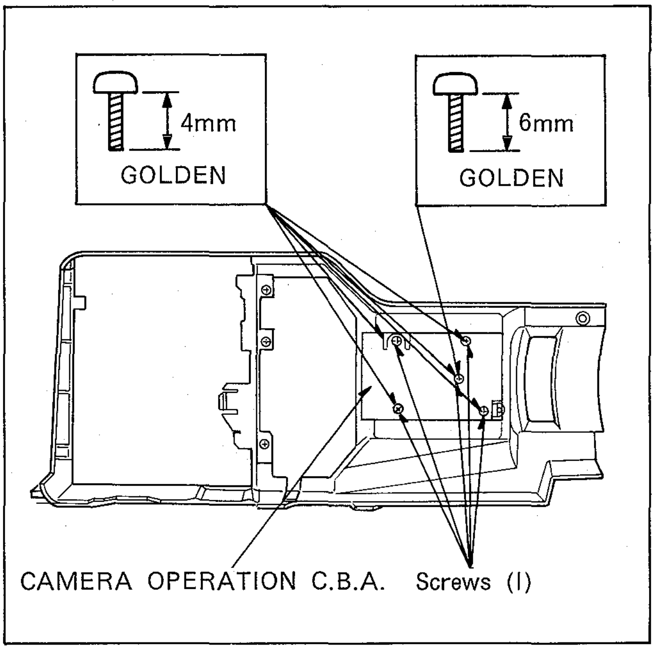

4mm
GOLDEN
6mm
GOLDEN
CAMERA OPERATION C.B.A.
Screws (I)

Fig. D10

10. Removal of Cassette Up Unit

(1) Remove 2 screws (J).
(2) Slide the cassette up unit in direction of allow and release the pins on the moving levers of cassette up unit from the enlarged circular insertion hole at end of the cassette guide slot.

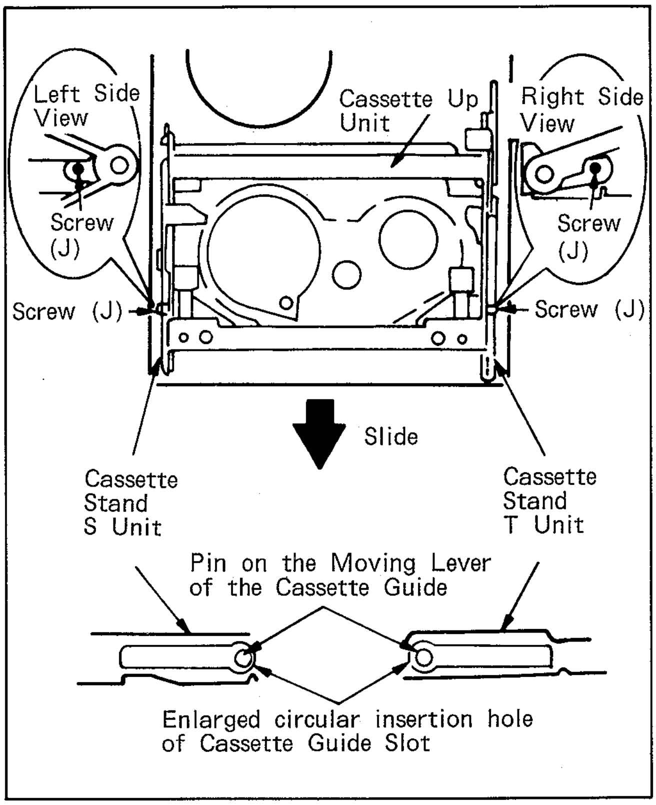

Left Side View
Screw (J)
Screw (J)
Cassette Up Unit
Right Side View
Screw (J)
Screw (J)
Slide
Cassette Stand S Unit
Cassette Stand T Unit
Pin on the Moving Lever of the Cassette Guide
Enlarged circular insertion hole of Cassette Guide Slot

Fig. D11

2-1-3. CAMERA SECTION

1. Removal of Process C.B.A.

(1) Remove 2 screws (K) and disconnect the connectors P303, P308, B305, B301, P309 and flexible card FP302 on process C.B.A.
(2) Remove the process C.B.A.

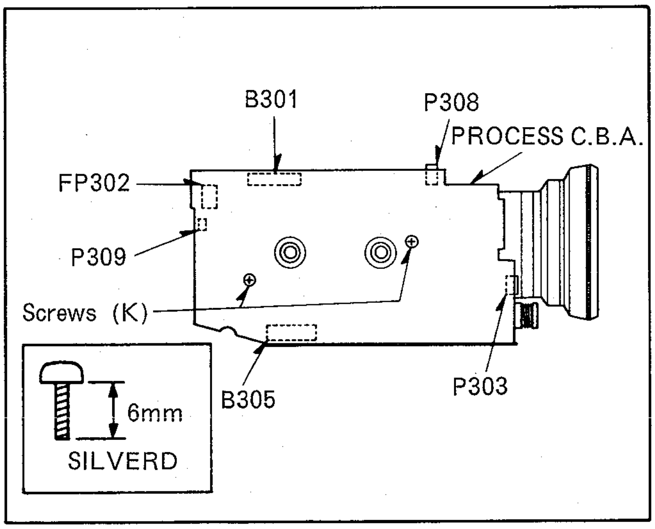

B301
P308
PROCESS C.B.A.
FP302
P309
Screws (K)
B305
P303
6mm
SILVERD

Fig. D12

2. Removal of Sensor C.B.A.

(1) Remove 2 screws (L) to remove the shield box.

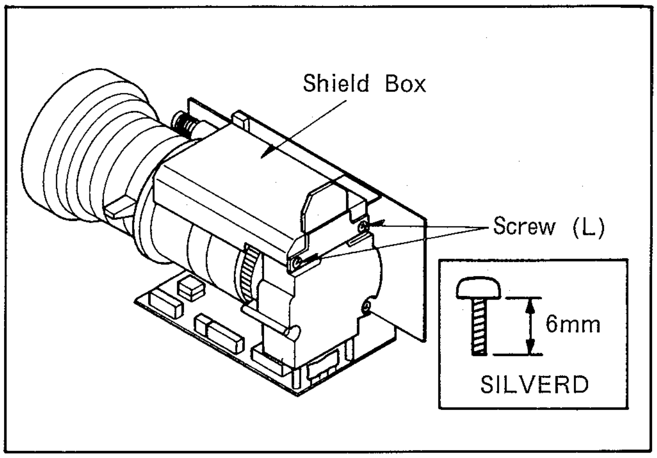

Shield Box
Screw (L)
6mm
SILVERD

Fig. D13

(2) Remove 2 screw (M) and disconnect the flexible card FP201 on sensor C.B.A.
(3) Remove the sensor C.B.A.

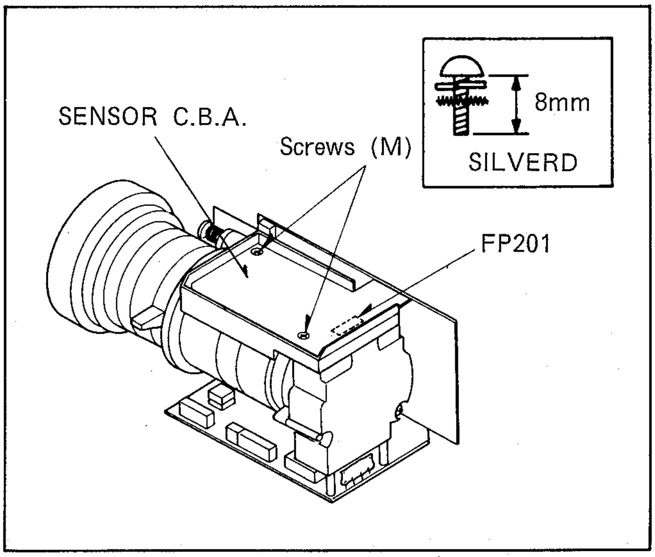

SENSOR C.B.A.
Screws (M)
8mm
SILVERD
FP201

Fig. D14

3. Removal of Secam Encoder C.B.A.

(1) Remove 2 screws (T) and disconnect the connectors P631 and FP631 on Secam Encoder C.B.A.
(2) Remove Secam Encoder C.B.A.

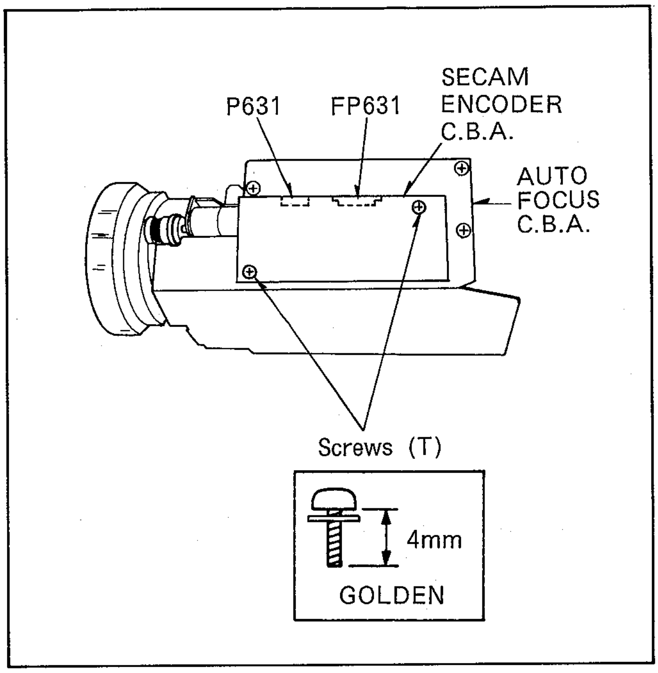

SECAM ENCODER C.B.A.
P631
FP631
AUTO FOCUS C.B.A.
Screws (T)
4mm
GOLDEN

Fig. D15

4. Removal of Auto Focus C.B.A.

(1) Remove 3 screws (N) to remove the SECAM ENCODER with barrier.
(2) Disconnect the connectors P703, P704, P705, P701 on Auto Focus C.B.A.
(3) Remove Auto Focus C.B.A.

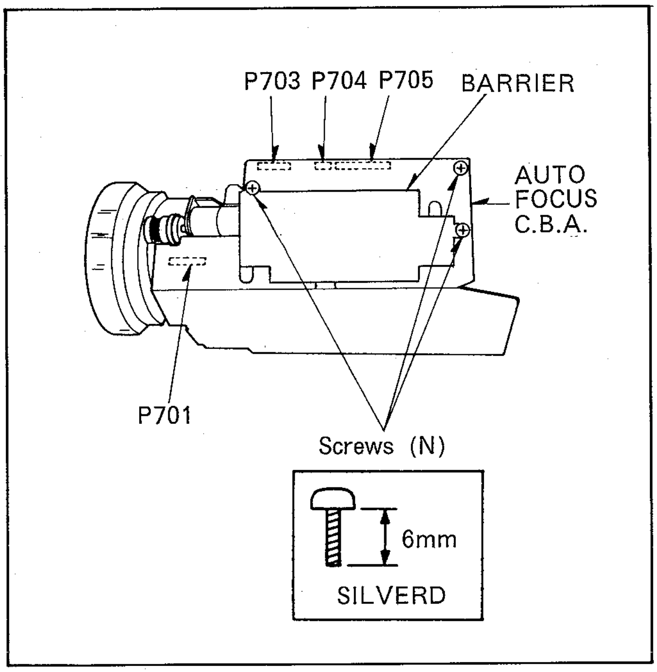

P703 P704 P705
BARRIER
AUTO FOCUS C.B.A.
P701
Screws (N)
6mm
SILVERD

Fig. D16

5. Removal of CCD Unit

(1) Remove 2 screws (O).
(2) Remove 2 screws (P) and then take out the CCD Shield box.
(3) Remove 2 screws (Q) and then take out the CCD Unit.

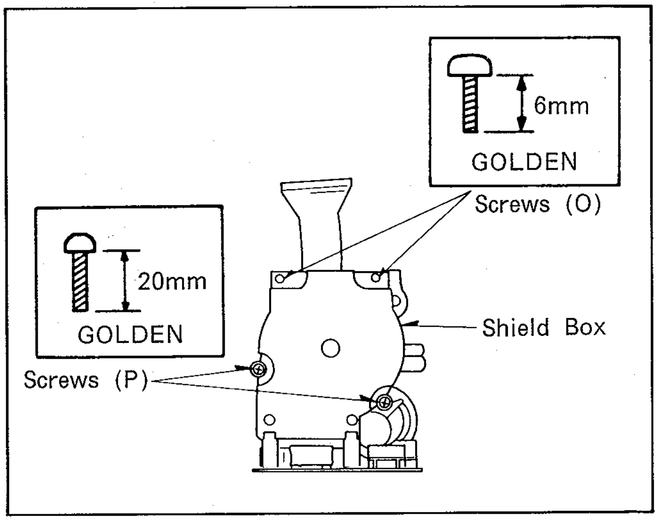

6mm
GOLDEN
Screws (O)
20mm
GOLDEN
Shield Box
Screws (P)

Fig. D17

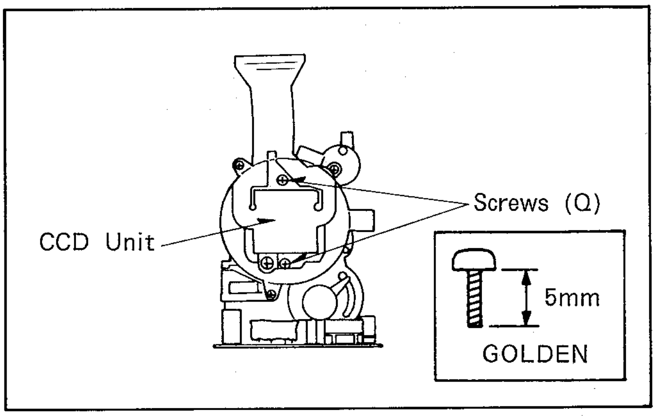

Screws (Q)
CCD Unit
5mm
GOLDEN

Fig. D18

6. Removal of Actuator Unit

(1) Remove 3 screws (R) and remove actuator unit.

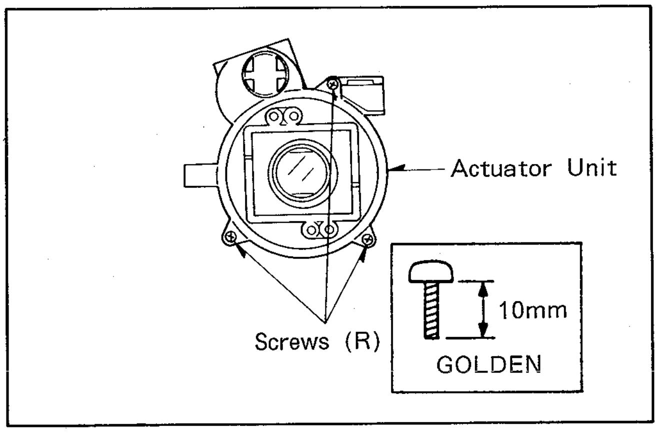

Actuator Unit
Screws (R)
10mm
GOLDEN

Fig. D19

2-1-4. E.V.F. SECTION

1. Removal of E.V.F. Case

(1) Remove 2 screws (S) to remove the E.V.F. case.

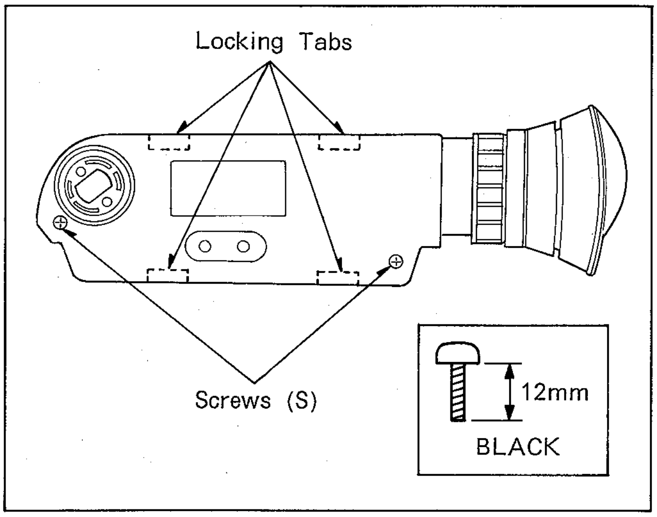

Locking Tabs
Screws (S)
12mm
BLACK

Fig. D20

2-2. PROCEDURES FOR CLEANING UPPER CYLINDER UNIT

(1) Position the Video Head to permit access for cleaning, and hold the Upper Cylinder to keep it from turning while cleaning.
(2) Gently rub the Video Head in the direction of tape travel with a Head Cleaning Stick (VFK27) moistened with Freon TF.
(3) Repeat for the other Video Heads.

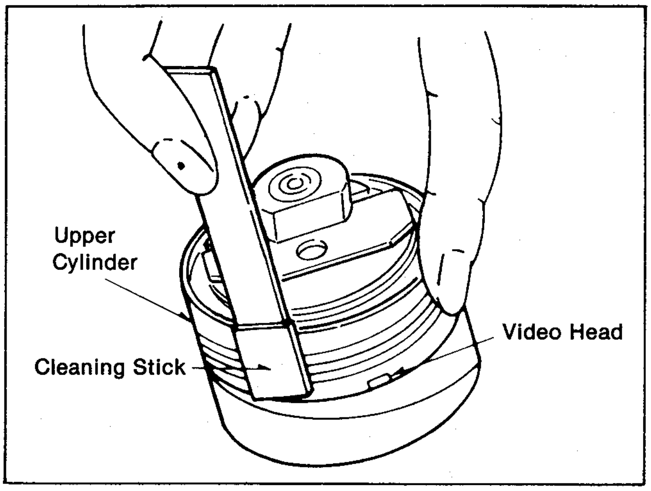

Upper Cylinder
Cleaning Stick
Video Head

Fig. U1

Note:
(1) Do not rub vertically.
(2) Do not apply any pressure to the head. If the contaminant is not easily removed, continued gentle wiping will usually remove it.

2-3. REPLACEMENT AND ADJUSTMENT PROCEDURES

2-3-1. REPLACEMENT OF FOCUS LENS UNIT

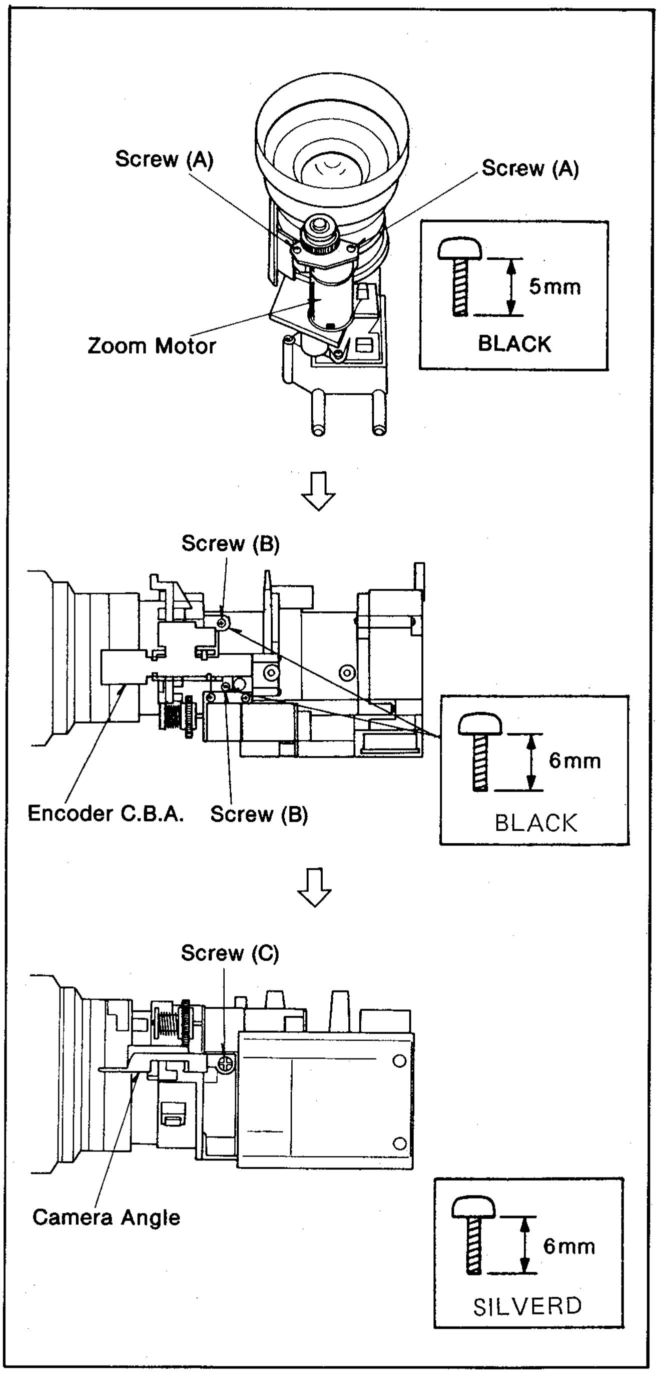

Screw (A)
Screw (A)
5mm
BLACK
Zoom Motor
Screw (B)
Encoder C.B.A.
Screw (B)
6mm
BLACK
Screw (C)
Camera Angle
6mm
SILVERD

Fig.M1

(1). Remove the camera unit from the VHS–C Movie.
(2). Remove the C.B.As (Process, Auto Focus, Sensor) from the camera unit.
(3). Unscrew the two screws (A) and remove the zoom motor.
(4). Unscrew the two screws (B) and remove the encoder C.B.A.
(5). Unscrew the screw (C) and remove the camera angle.

(6). Remove the focus fastener and tape as shown in Fig.M2.

(7). Remove the focus ring by turning the focus adjustment pitch to the counter clockwise.

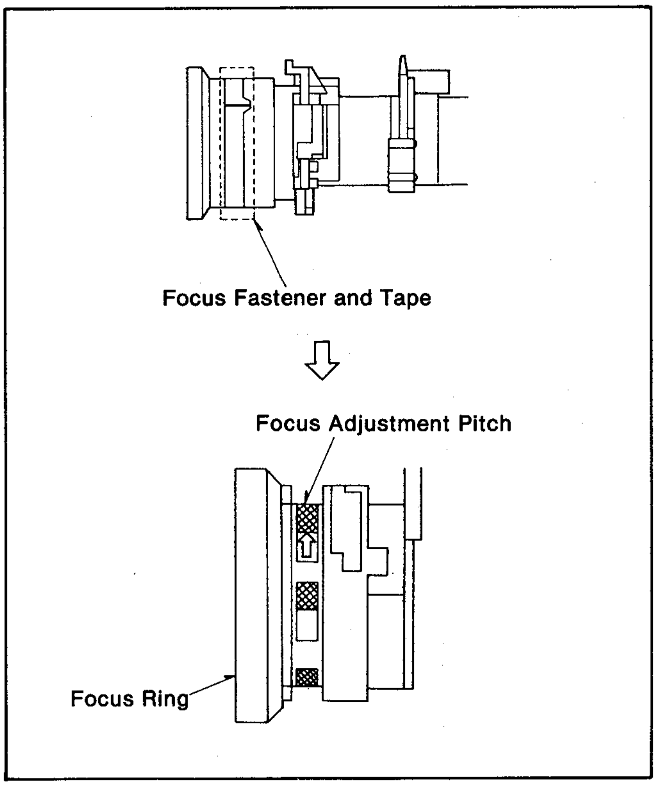

Focus Fastener and Tape
Focus Adjustment Pitch
Focus Ring

Fig.M2

(8). Unscrew the four screws (D) and remove the focus lens unit with iris unit as shown in Fig.M3.

(9). Remove the iris unit from focus lens unit and replace the focus lens unit.

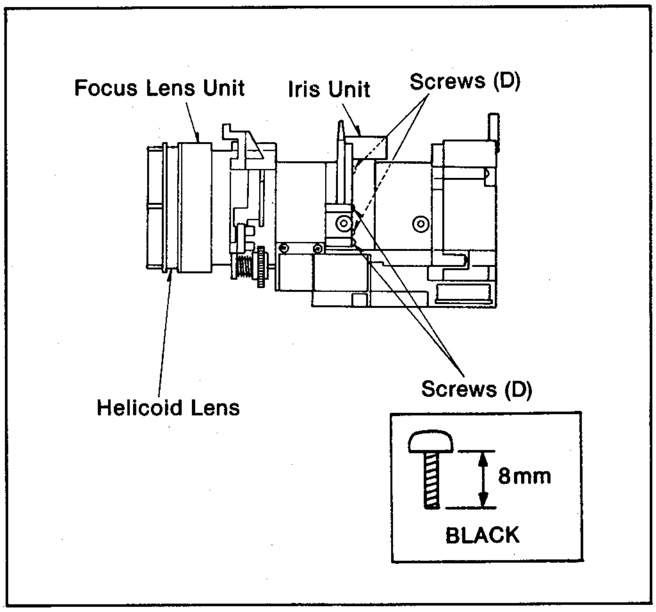

Focus Lens Unit
Iris Unit
Screws (D)
Helicoid Lens
Screws (D)
8mm
BLACK

Fig.M3

[Adjustment Procedures]

Note:
Do not remove the helicoid lens from focus lens unit because it has the relation of pairing between them.

If the helicoid lens is happened to be removed,the helicoid lens should be installed as following step.

a. Install the helicoid lens so that the projection with groove on helicoid lens comes to projection on lens unit as shown in Fig.M4.

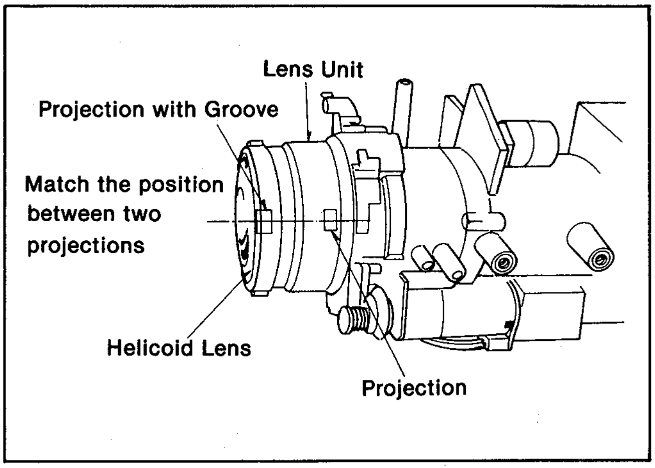

Lens Unit
Projection with Groove
Match the position between two projections
Helicoid Lens
Projection

Fig. M4

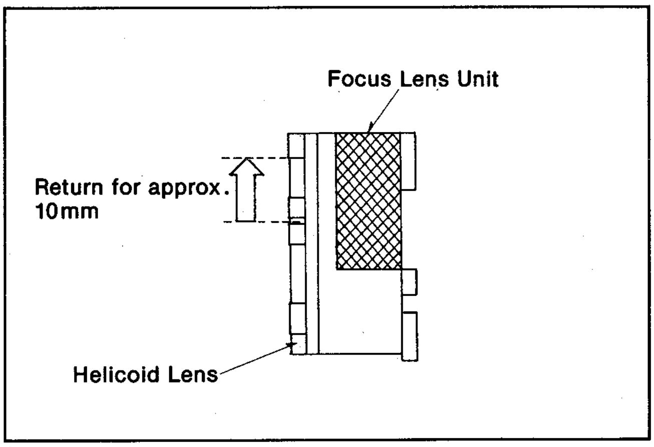

Focus Lens Unit
Return for approx. 10mm
Helicoid Lens

Fig. M5

(10). After replacing the focus lens unit, install the iris unit to focus lens unit.

(11). Install the focus lens unit with iris unit and then tighten the four screws (D) as shown in Fig. M3.

(12). Adjust the helicoid lens position as follows.

a. Turn the helicoid lens to fully clockwise and return it for approx. 10mm (so that next installation become easy) as shown in Fig.M5.

(13). Install the focus ring so that the infinity (∞) mark on focus ring is come to red–line on focus lens unit as shown in Fig.M6.

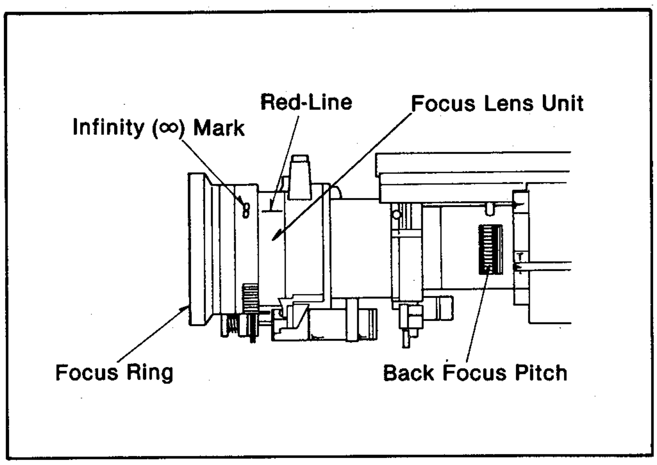


Fig.M5

(14). Install the C.B.As (Process, Auto Focus, Sensor, Encoder) and zoom motor in reverse assembly order.

(15). After installation of the focus ring ,adjust the position of focus adjustment pitch and back focus pitch as follows.

a. Aim the camera at the object in 3m distance from the surface of CCD unit (in 2.9m distance from focus ring).
b. Set the focus ring so that the 3m mark of distance indication on focus ring is come to red−line(Distance indication Line) on focus lens unit and keep the focus ring not to move during following adjustment.
c. Turn the zoom ring fully to "Tele" position (54mm position).
d. Adjust the focus adjustment pitch (refer to Fig. M2) to obtain the best focus and stick the tape(which was stuck on the unit before) on to the focus adjustment pitch(refer to Fig.M2).
e. Install the focus fastener as shown in Fig.M2.
f. Turn the zoom ring fully to "wide" position (9mm position).
g. Prepare the Hunting chart for object and aim the camera at the hunting chart 3m distance.
h. Zoom all the way in full tele position and focus the lens on the object.
i. Confirm that the focus ring indicates 3m.
j. Adjust the back focus pitch so that the sharpest focus is obtained.
k. Zoom all the way back and adjust the back focus pitch (refer to Fig.M6)so that the sharpest focus is obtained.
l. Repeat the procedure as follows, zoom in,focus,zoom out and adjust until the best focus is obtained over the entire zoom range.

2-3-2. REPLACEMENT OF CAPSTAN MOTOR UNIT

(1) Ensure Unit is in the STOP mode. Remove the Capstan Belt.
(2) Unlock Flexible Cable P2603 on the Drive C.B.A.

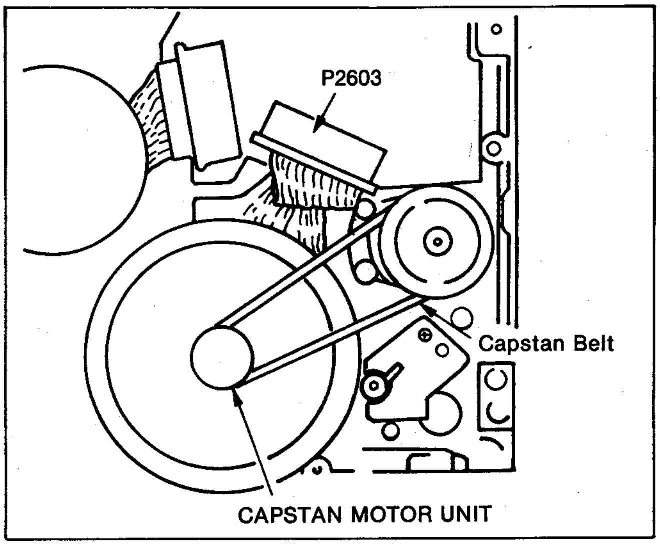


Fig.M6

(3) Remove the Cassette Up Holder. LP Head Amp, head Amp Holder and Mode Select Switch Unit.
(4) Take out the Idler Gear while pushing on the Tape Guide lever Unit unit until it clears the Idler Gear Teeth as shown in Fig.M7.

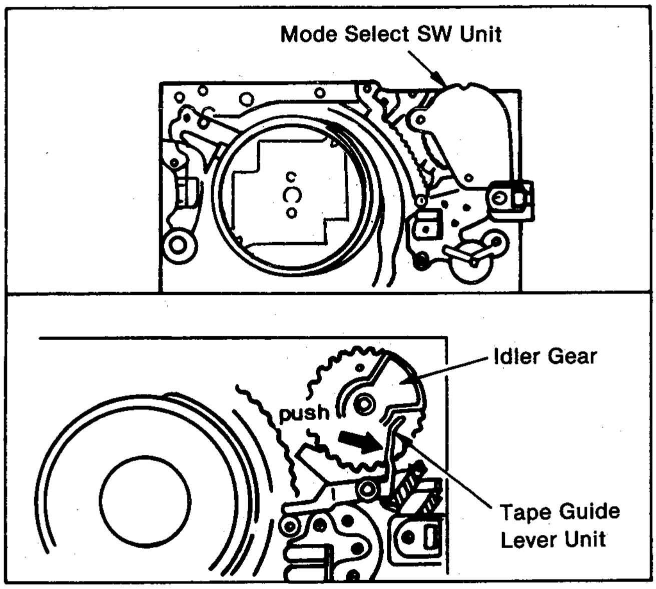


Fig.M7

(5) Remove 2 screws (B). Then remove screws (C) While slighty pushing on the Sector Gear Unit to remove screw (C) as shown in Fig.M8. Then remove the A/C Head Base Unit.

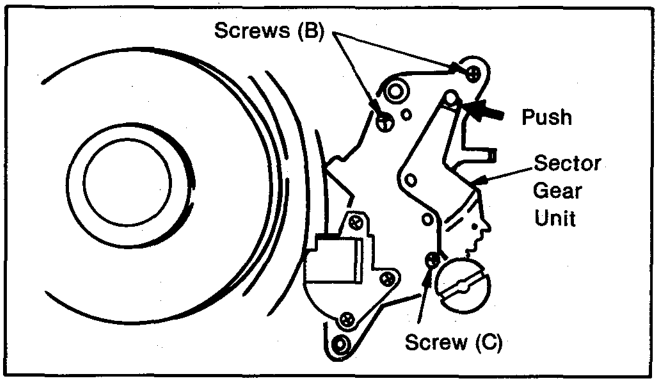

Screws (B)
Push
Sector Gear Unit
Screw (C)

Fig.M8

(6) Remove the Cut Washer and Motor Gear. Then place the Unit in play position completely by rotating loading Idle Gear clockwise as shown in Fig M9.

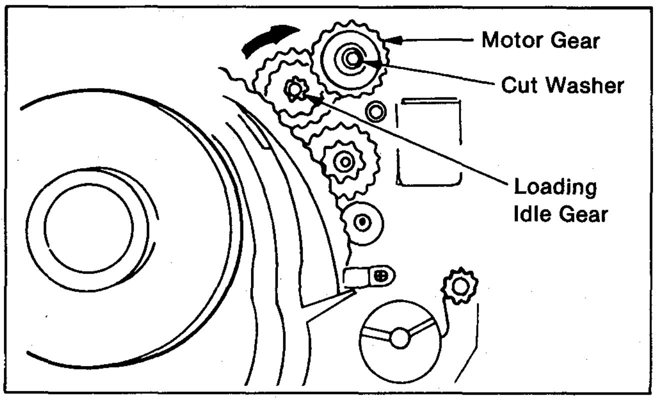

Motor Gear
Cut Washer
Loading Idle Gear

Fig. M9

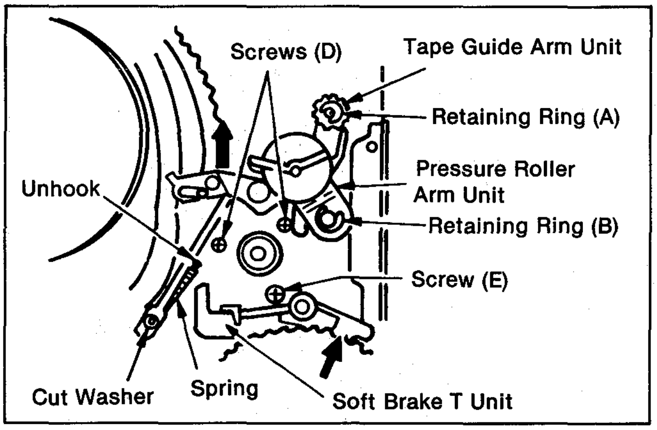

Screws (D)
Tape Guide Arm Unit
Retaining Ring (A)
Pressure Roller Arm Unit
Unhook
Retaining Ring (B)
Screw (E)
Cut Washer
Spring
Soft Brake T Unit

Fig.M10

(7) Remove Retaining Ring (A) and Tape Guide Arm Unit by pushing it in the direction shown by arrow and lifting it off its Post.
(8) Remove the Cut Washer and unhook the Spring.
(9) Remove Retaining Ring (B) and Pressure Roller Arm Unit.
(10) Refer to the Disassembly/Assembly and Adjustment Procedures of Mechanism. Use steps 3, 4 and 5 to remove the Takeup Reel Gear, Clutch Gear Unit and Soft Brake T Unit.
(11) Remove 2 Screws (D) and Screw (E) while pushing slightly on the Soft Brake T Unit.Then remove the Capstan Stator Unit from Bottom Side.
(12) Replace the new Capstan Motor Unit and then tighten 2 Screws (D) and Screw (E).

Adjustment of FG Head Gap

* Specification: .... 0.1~0.15mm
(1) Slightly loosen the 2 screws.
(2) Put the paper which is used for cover page of this volume into the gap between F.G.Head and Capstan rotor.
(3) Afer adjustment, tighten 2 screws.

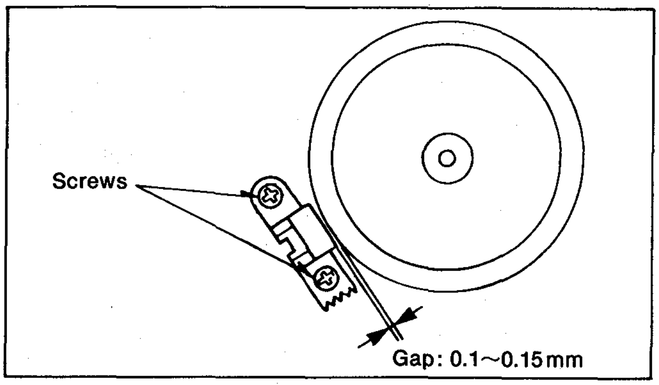

Screws
Gap: 0.1~0.15mm

Fig.M11

Note:
Do not touch the surface of rotor and keep any magnetizable material away.

2-3-3. ADJUSTMENT OF TENSION POST POSITION

(1) Remove the Cassette Up Unit.
(2) Cover the Tape End Sensor and Cassette Up/Down Sensor with Black Tape.
(3) Push the Play button to complete loading operation sequence.
(4) As soon as loading is completed, disconnect the AC plug of AC Adaptor.
(5) Loosen Screw (F) a little bit and adjust the Tension Adjust Piece (in either direction) as indicated by the arrow so that the center of the Tension Post is 1mm to the left of the center of the S1 Post as shown in Fig.M12. Tighten Screw (F) to secure it.

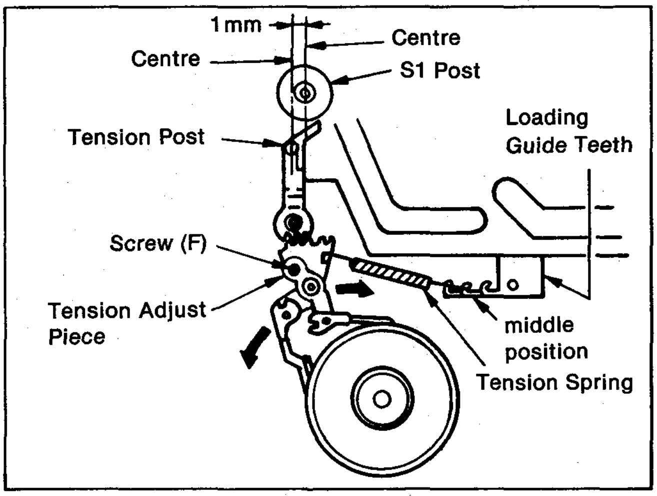

1mm
Centre
Centre
S1 Post
Tension Post
Loading Guide Teeth
Screw (F)
Tension Adjust Piece
middle position
Tension Spring

Fig. M12

Note:
After this adjustment, reposition Tension Spring on Loading Guide Teeth to middle position as a Back Tension Adjustment as shown in Fig.M12.

2-3-4. HEIGHT ADJUSTMENT OF TAPE GUIDE POST (PRELIMINARY ADJUSTMENT)

Height adjustment of S1 Post

* Specification: .... 14.72+-0.1mm

(1) For adjustment of S1 post height, turn 4mm Nut (A) slightly in either direction as necessary to the correct clearance between the upper edge of the lower tape guide on S1 Post and the lower portion of Cassette Stand S Unit.

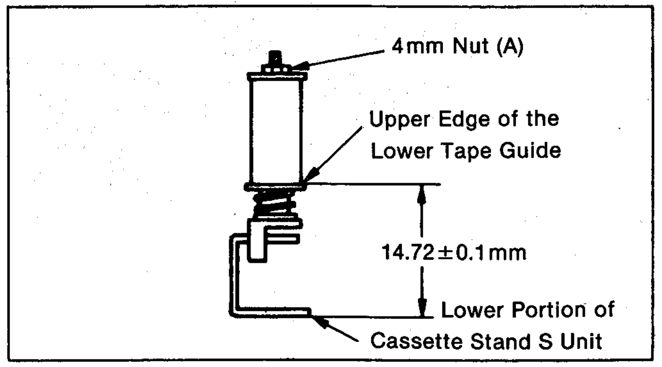

4mm Nut (A)
Upper Edge of the Lower Tape Guide
14.72±0.1mm
Lower Portion of Cassette Stand S Unit

Fig. M13

Height adjustment of S2 and T1 Posts

* Specification:
S2 Post .... 0.56+-0.1mm
T1 Post .... 0.74+-0.1mm

(1) For adjustment of S2 and T1 post height, loosen the Black Lock Screw located on the lower portion of Posts (S2 & T1) using the Lock Screwdriver .
(2) Turn top of post with Hex. Wrench (1.5mm) slightly in either direction as necessary to the correct clearance as shown in Fig.M14.

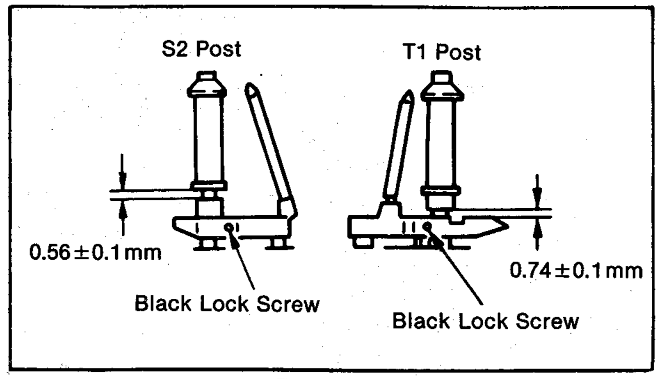


Fig. M14

2-3-5. TAPE INTERCHANGEABILITY ADJUSTMENT (FINAL ADJUSTMENT)

Note:
1) To perform these adjustment/confirmation procedures, make sure that the Tracking Control is set in the fixed (neutral) positionby pushing both of the Tracking Control Up/Down Switches, on the Main C.B.A., in at the same time.
2) Before these adjustment/confirmation procedures, remove the cassette protective Tape Cover from a Cassette Tape or the Alignment Tape (VFM8180H8PF).

* Equipment Required:
Dual Trace Oscilloscope
Alignment Tape .... (VFM8180H8PF)
Hex. Wrench (1.5mm)

1. Confirmation of Tape Travel

(1) Play back a cassette tape and confirm that the tape travels without curling at the upper and lower guides on Posts S2 and T1.

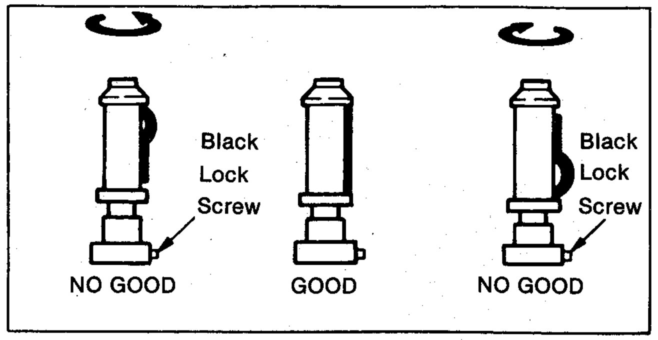


Fig. M15

(2) If curling is apparent, adjust the height of posts by turning the top of Post with Hex. Wrench. (for S2 and T1)

Note:
Before turning S2 and T1, slightly loosen the Black Lock Screw using the Lock Screwdriver.

2. Confirmation of A/C Head

This confirmation is required when the A/C Head or Capstan Motor is replaced and for a preliminary height adjustment.
For final adjustment, perform items 3 and 4.

(1) Looking at the lower edge of the Control Head with the tape in motion, ensure that the lower edge of the tape runs 0.25mm above the lower edge of the Control Head. If it doesn't, turn Black Screw (A) slightly in either direction as necessary to correct it. Turn clockwise to lower the head and counterclockwise to raise it.

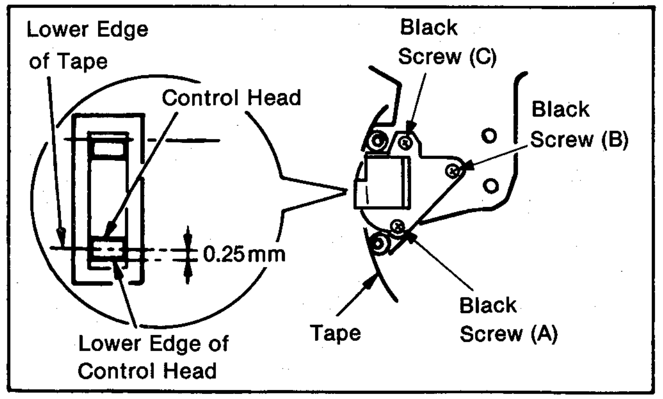


Fig. M16

3. Confirmation of Tilt of A/C Head

(1) Play back a cassette tape and confirm that the tape runs properly between lower and upper limits of T3 Post. Also confirm that the tape is running smoothly.
(2) If adjustment is required, turn Black Screw (B), in Fig.M16, counterclockwise until curing is appearmentat lower edge of T3 Post. Then turn Black screw (B) clockwise until the curling smoothes.

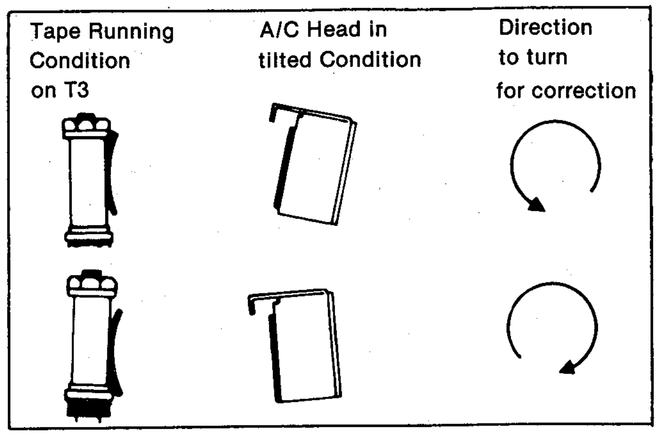

Tape Running Condition on T3
A/C Head in tilted Condition
Direction to turn for correction

Fig. M17

4. Height and Azimuth Adjustment of A/C Head

(1) Connect the oscilloscope to TP4001 on the Main C.B.A.
(2) Play back the Monoscope portion (6KHz, Mono) of the Alignment Tape.
(3) Adjust Black screw (C) on the A/C Head Base in Fig.M16 so that the output level is at a maximum.

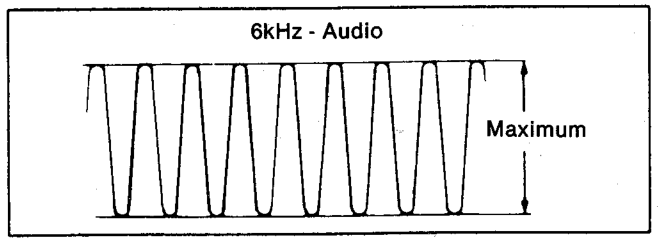


Fig. M18

(4) Readjust Block screw (A) shown in Fig.M16 for maximum output.
(5) Disconnect the oscilloscope.

5. Horizontal Position Adjustment of A/C Head

(1) Set the tracking control to the fixed (neutral) position by pushing both of the tracking control Up/Down Switches, on the Main C.B.A., in at the same time. Connect the oscilloscope to TP3501 on the Main C.B.A. Use TP2001 as a trigger.
(2) Play back the monoscope portion of the Alignment Tape and confirm that RF envelope appears,as in Fig.M20.
(3) If adjustment is reqired, slowly move the A/C Head Base back and forth using a screwdriver by turning screw (D) so that the envelop is at a maximum.

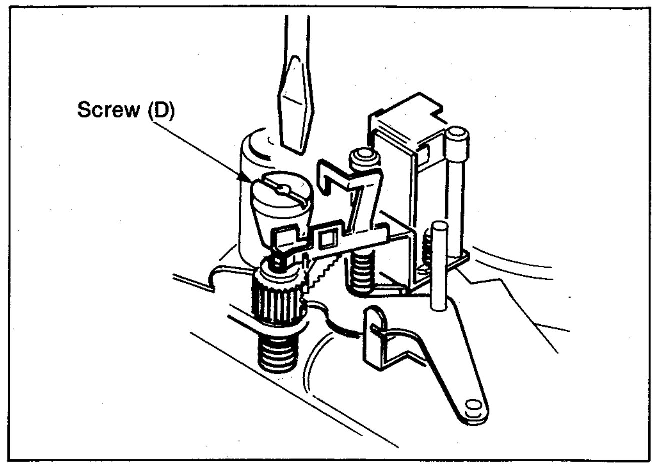


Fig. M19

(4) Confirmation of the correct adjustment can be made by alternately pushing the Tracking Control Up/Down Switches, on the Main C.B.A. to check the symmetry of the envelope.
(5) Reconfirm the symmetry of the envelope. If it has cahnged, repeat step (3) and (4) .

6. Confirmation/Adjustment of Envelope Output

(1) Set the tracking control to the fixed (neutral) position by pushing both of the tracking control Up/Down Switches, on the Main C.B.A., in at the same time. Connect the oscilloscope to TP3501 on the Main C.B.A. Use TP2001 as a trigger.
(2) Playback the Monoscope portion of the Alignment Tape and adjust the height of posts S2 and T1 watching the scope display so that the envelope becomes as flat as possible. (V1/V−max >= 0.7, V2/V−max >= 0.8)
If adjustment is required, turn top of post with Hex. Wrench (1.5mm). For adjustment of S2 and T1, refer to Item 1 and it's Note.

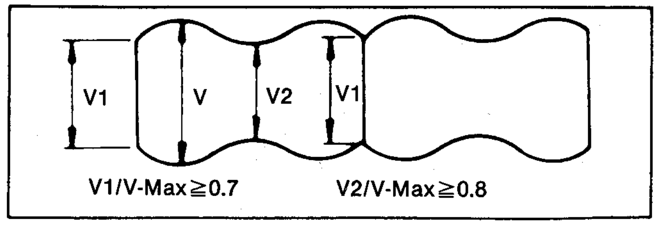


Fig. M20

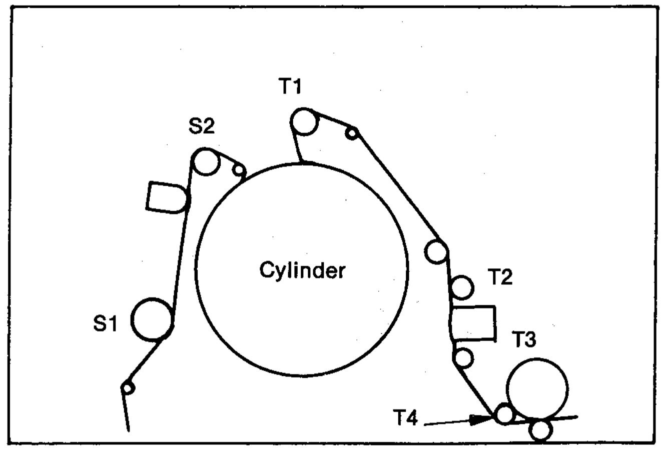


Fig. M21

(3) When
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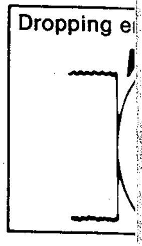

(4) When
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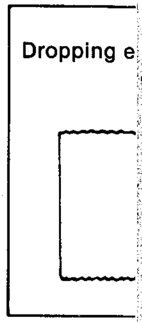
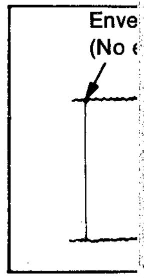


(5) The
Fig. M24 v



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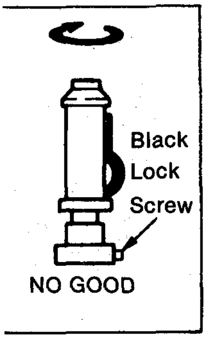

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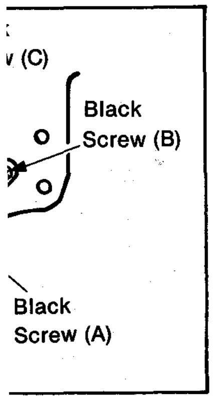
it doesn't, turn
either direction
urn clockwise to
ockwise to raise



3. Confirmation of Tilt of A/C Head

(1) Play back a cassette tape and confirm that the tape runs properly between lower and upper limits of T3 Post. Also confirm that the tape is running smoothly.

(2) If adjustment is required, turn Black Screw (B), in Fig.M16, counterclockwise until curing is appearmentat lower edge of T3 Post. Then turn Black screw (B) clockwise until the curling smoothes.

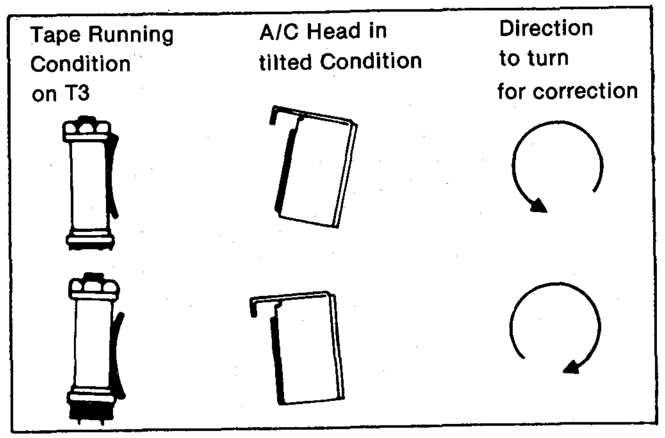

Tape Running Condition on T3
A/C Head in tilted Condition
Direction to turn for correction

Fig. M17

4. Height and Azimuth Adjustment of A/C Head

(1) Connect the oscilloscope to TP4001 on the Main C.B.A.

(2) Play back the Monoscope portion (6KHz, Mono) of the Alignment Tape.

(3) Adjust Black screw (C) on the A/C Head Base in Fig.M16 so that the output level is at a maximum.

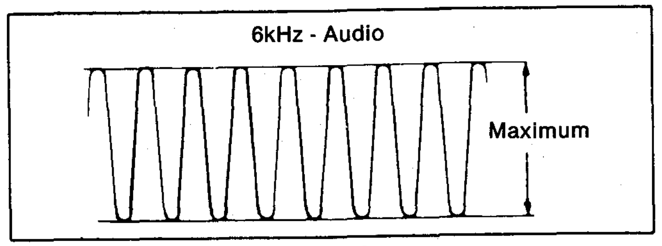


Fig. M18

(4) Readjust Block screw (A) shown in Fig.M16 for maximum output.

(5) Disconnect the oscilloscope.

5. Horizontal Position Adjustment of A/C Head

(1) Set the tracking control to the fixed (neutral) position by pushing both of the tracking control Up/Down Switches, on the Main C.B.A., in at the same time. Connect the oscilloscope to TP3501 on the Main C.B.A. Use TP2001 as a trigger.

(2) Play back the monoscope portion of the Alignment Tape and confirm that RF envelope appears,as in Fig.M20.

(3) If adjustment is reqired, slowly move the A/C Head Base back and forth using a screwdriver by turning screw (D) so that the envelop is at a maximum.

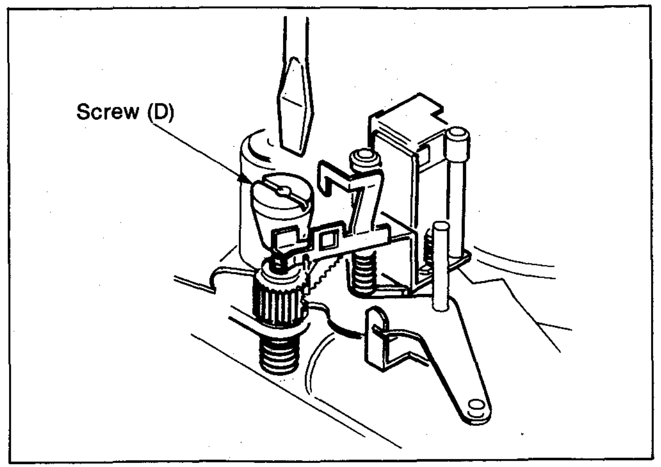


Fig. M19

(4) Confirmation of the correct adjustment can be made by alternately pushing the Tracking Control Up/Down Switches, on the Main C.B.A. to check the symmetry of the envelope.

(5) Reconfirm the symmetry of the envelope. If it has cahnged, repeat step (3) and (4) .

6. Confirmation/Adjustment of Envelope Output

(1) Set the tracking control to the fixed (neutral) position by pushing both of the tracking control Up/Down Switches, on the Main C.B.A., in at the same time. Connect the oscilloscope to TP3501 on the Main C.B.A. Use TP2001 as a trigger.

(2) Playback the Monoscope portion of the Alignment Tape and adjust the height of posts S2 and T1 watching the scope display so that the envelope becomes as flat as possible. (V1/V−max >= 0.7, V2/V−max >= 0.8) If adjustment is required, turn top of post with Hex. Wrench (1.5mm). For adjustment of S2 and T1, refer to Item 1 and it's Note.

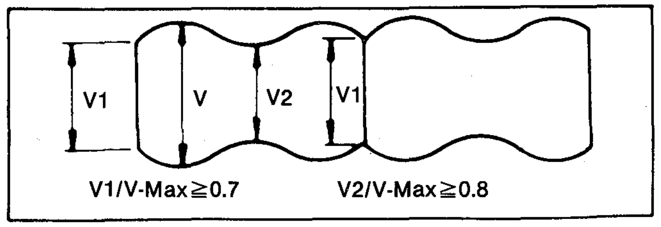


Fig. M20

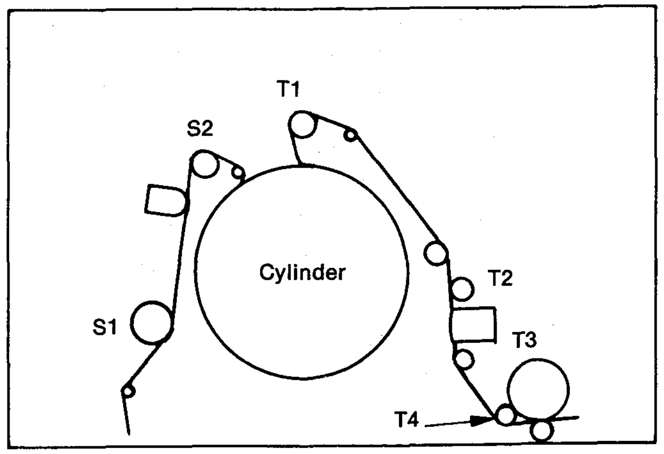


Fig. M21

(3) When the scope display is as shown in Fig.M22, ajust the height of S2 so that the waveform looks like Fig.M24.

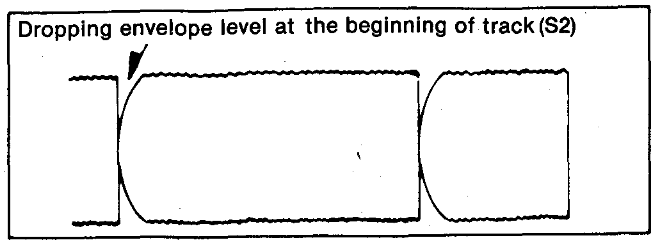


Fig. M22

(4) When the scope display is as shown in Fig.M23, adjust the height of T1 so that the waveform looks like Fig.M24.

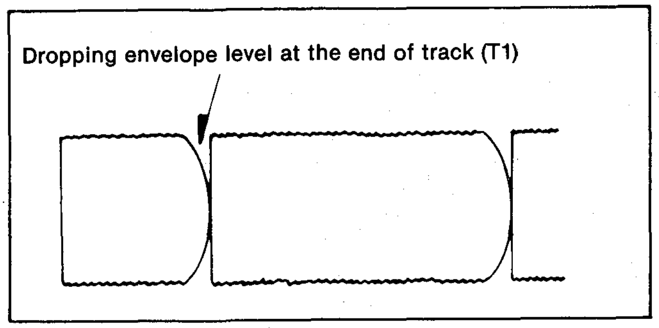


Fig. M23

(5) The scope display should appear as shown in Fig. M24 when S2 and T1 Posts are ajusted properly.

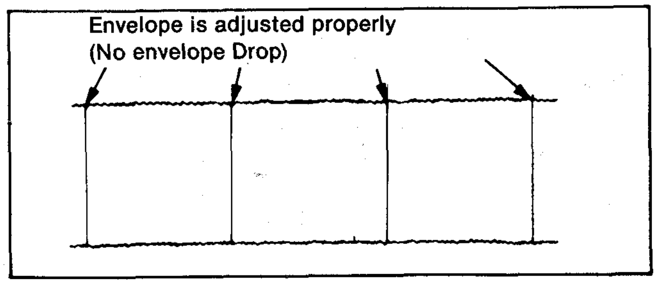


Fig. M24

Note:

1) Upon completion of adjustment of S2 and T1, tighten the Black Lock Screw on S2 and T1 using Lock Screwdriver. Then confirm the Horizontal Position of A/C Head by pushing the Tracking Control Up or Down switches on the Main C.B.A. alternately to check the symmetry of the envelope. And if required, perform "Horizontal Position Adjustment of A/C Head".
2) After these adjustment/confirmation procedures, replace the cassette protective Tape Cover.

2-3-6. ASSEMBLY AND ADJUSTMENT PROCEDURE OF MECHANISM

This procedure starts with the condition that the Cabinet parts and Cassette Up Unit have been removed.
When re-assembling, perform the step (s) in the reverse order.

STEP/ LOC No.	START-ING No.	PART		REMOVAL		INSTALLATION
				Fig. No.	REMOVE ★ UNHOOK/UNLOCK/ RELEASE	ADJUSTMENT #CONDITION *REMARKS
①	1	RT (S) UNIT D.D. CYL. UNIT	T/ B	M27, 28	3 (S-0) ★ Connectors	★ Remove the Earth Plate before Step ①
②	3	TAKEUP REEL GEAR	T	M26, 28	(C-1), (W-1) <Note 1>	(+)
③	3	CLUTCH GEAR UNIT	T	M26, 28	(C-2), (W-2) <Note 1>	(+)
④	4	SOFT BRAKE T UNIT	T	M26, 28	(C-3), ★ (P-1) <Note 1>	(+)
⑤	6	HEAD AMP ANGLE	T	M29	2 (S-2), (S-3) ★ Connector	★ Remove the Head amp Unit before Step ⑤.
⑥	6	MODE SELECT SWITCH UNIT	T	M26, 29	(S-3) ★ Connector	Align the Punch Mark with the Notch. # STOP MODE
⑦	6	TAPE GUIDE LEVER UNIT	T	M26, 29	(C-4), ★ (P-2) <Note 1>	See, Hooking Position.
⑧	7	IDLER GEAR	T	M26, 30	------------------------------	(+) Align the Notch with the Shaft of Loading Idle Gear. # STOP MODE
⑨	8	SECTOR GEAR UNIT	T	M26, 30	(C-5)	(+) Align the Hole with the Notch. # STOP MODE
⑩	9	A/C HEAD & BASE UNIT	T	M26, 30	4 (N-1) for removal of A/C HEAD	<Note 2>
⑪	10	MOTOR GEAR	T	M26, 31	(C-5) <Note 1>	(+) # STOP MODE (Fig. M31)
⑫	11, 10	LOADING MOTOR UNIT	T	M31	2 (S-5)	<Note 2>
⑬	10	TAPE GUIDE LEVER UNIT	T	M26, 31	(R-1), ★ (P-3)	See, Hooking Position.
⑭	14	TENSION ARM UNIT	T	M26, 32	(C-7), (W-3) <Note 1>	(+) See, Adjustment of Tension Post Position. Align the Punch Mark with the Notch. # Loading
⑮	15	SUPPLY REEL TABLE UNIT	T	M26, 32	(C-8), (W-4) <Note 1>	(+)
⑯	15	TENSION BAND ARM UNIT	T	M26, 32	(C-9), ★ (P-4) <Note 1>	(+)
⑰	16, 14	CASSETTE STAND S ASS'Y	T	M26, 33	2 (S-6), ★ Connector	(+) <Note 2>

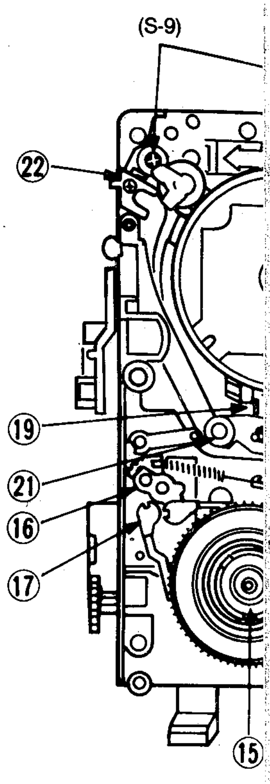
Fig. M25-1

STEP/ LOC No.	START-ING No.	PART		REMOVAL		INSTALLATION
				Fig. No.	REMOVE ★ UNHOOK/UNLOCK/ RELEASE	ADJUSTMENT #CONDITION *REMARKS
⑱	18	SHIELD COVER	B	M27	(S-7)	
⑲	18, 11, 10, 2	LOADING GUIDE ASS'Y	T	M26, 34	6(S-8), ★ (L-1), ★ Connector	(+) <Note 2> <Note 3> # Loading
⑳	19	TAKEUP SHAFT HOLDER ASS'Y	T	M26	(C-10)	(+) <Note 1>
㉑	19	SUPPLY SHAFT HOLDER ASS'Y	T	M26	------------------------------	(+)
㉒	19	V STOPPER BASE ASS'Y	T	M26	2 (S-9)	
㉓	19, 13	PRESSURE ROLLER ARM UNIT	T	M26, 35	(R-2), (C-11), ★ (P-5), <Note 1>	(+) See, Hooking Condition.
㉔	23, 5	CAPSTAN MOTOR UNIT	T	M26, 27, 35	★ Capstan Belt, 3 (S-10), ★ Connector	<Note 2> See, Replacement of Capstan Motor Unit.
㉕	4	CASSETTE STAND-T	T	M26, 35	2(S-11)	(+) <Note 2>
㉖	19	RING GUIDE 1	T	M36	(S-12)	See, setting condition.
㉗	19	RING GUIDE 3	T	M36	(S-13)	See, setting condition.
㉘	27, 26, 21, 20	LOADING RING S UNIT	T	M26, 36	------------------------------	(+) Align the Hole with punch Mark.
㉙	28	LOADING DRIVE GEAR-T	T	M36	(C-12) <Note 1>	(+)
㉚	28	RING GUIDE GEAR-S (2 USED)	T	M36	------------------------------	------------------------------ White Colour Gear
㉛	31	RING LIMITER	T	M26, 37	(S-14)	
㉜	28	LOADING RING T UNIT	T	M36, 37	------------------------------	See, setting Condition. Align the Punch Mark with the Notch.
㉝	31	LOADING IDLE GEAR	T	M26, 37	------------------------------	(+) Align the Punch Mark with the Notch.
㉞	32, 28, 19	RING GUIDE GEAR-T (2 USED)	T	M37	------------------------------	(+) Black Color Gear # STOP MODE
㉟	10	LOADING DRIVE GEAR-S	T	M36, 37	(C-13) <Note 1>	(+)
㊱	33, 32, 30, 28	RING GUIDE-2	T	M36, 37	(S-15)	
㊲	32, 28, 22, 19, 17	LOADING GUIDE-S UNIT	T	M38	3(S-16)	<Note 2>

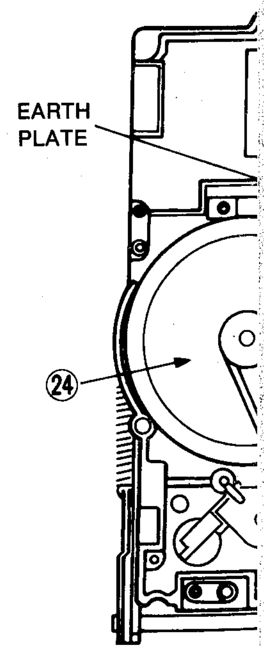
List of Abbreviations:
T=Top, B=Bottom,
(R-1)=Retaining Ring (R-1); (P-1)=Spring (P-1); (S-1)=Screw (S-1);
(W-1)=Washer (W-1); 2(S-2)=2 Screws (S-2); (C-1)=Cut Washer (C-1):
(L-1)=Locking Tab (L-1)
(N-1)=Nut (N-1)
(+)=Refer to Exploded Views for Lubrication information

Fig. M25-2

T



B



STEP/ LOC No.	START- ING No.	PART		REMOVAL		INSTALLATION
				Fig. No.	REMOVE ★ UNHOOK/UNLOCK/ RELEASE	ADJUSTMENT ♯CONDITION ＊REMARKS
⑱	18	SHIELD COVER	B	M27	(S-7)	
⑲	18, 11, 10, 2	LOADING GUIDE ASS'Y	T	M26, 34	6(S-8), ★ (L-1), ★ Connector	(+) <Note 2> <Note 3> ♯ Loading
⑳	19	TAKEUP SHAFT HOLDER ASS'Y	T	M26	(C-10)	(+) <Note 1>
㉑	19	SUPPLY SHAFT HOLDER ASS'Y	T	M26	--------------------------------	(+)
㉒	19	V STOPPER BASE ASS'Y	T	M26	2 (S-9)	
㉓	19, 13	PRESSURE ROLLER ARM UNIT	T	M26, 35	(R-2), (C-11), ★ (P-5), <Note 1>	(+) See, Hooking Condition.
㉔	23, 5	CAPSTAN MOTOR UNIT	T	M26, 27, 35	★ Capstan Belt, 3 (S-10), ★ Connector	<Note 2> See, Replacement of Capstan Motor Unit.
㉕	4	CASSETTE STAND-T	T	M26, 35	2(S-11)	(+) <Note 2>
㉖	19	RING GUIDE 1	T	M36	(S-12)	See, setting condition.
㉗	19	RING GUIDE 3	T	M36	(S-13)	See, setting condition.
㉘	27, 26, 21, 20	LOADING RING S UNIT	T	M26, 36	--------------------------------	(+) Align the Hole with punch Mark.
㉙	28	LOADING DRIVE GEAR-T	T	M36	(C-12) <Note 1>	(+)
㉚	28	RING GUIDE GEAR-S (2 USED)	T	M36	--------------------------------	-------------------------------- White Colour Gear
㉛	31	RING LIMITER	T	M26, 37	(S-14)	
㉜	28	LOADING RING T UNIT	T	M36, 37	--------------------------------	See, setting Condition. Align the Punch Mark with the Notch.
㉝	31	LOADING IDLE GEAR	T	M26, 37	--------------------------------	(+) Align the Punch Mark with the Notch.
㉞	32, 28, 19	RING GUIDE GEAR-T (2 USED)	T	M37	--------------------------------	(+) Black Color Gear ♯ STOP MODE
㉟	10	LOADING DRIVE GEAR-S	T	M36, 37	(C-13) <Note 1>	(+)
㊱	33, 32, 30, 28	RING GUIDE-2	T	M36, 37	(S-15)	
㊲	32, 28, 22, 19, 17	LOADING GUIDE-S UNIT	T	M38	3(S-16)	<Note 2>

List of Abbreviations:
T=Top, B=Bottom,
(R-1)=Retaining Ring (R-1); (P-1)=Spring (P-1); (S-1)=Screw (S-1);
(W-1)=Washer (W-1); 2(S-2)=2 Screws (S-2); (C-1)=Cut Washer (C-1):
(L-1)=Locking Tab (L-1)
(N-1)=Nut (N-1)
(+)=Refer to Exploded Views for Lubrication information

Fig. M25-2

TOP VIEW

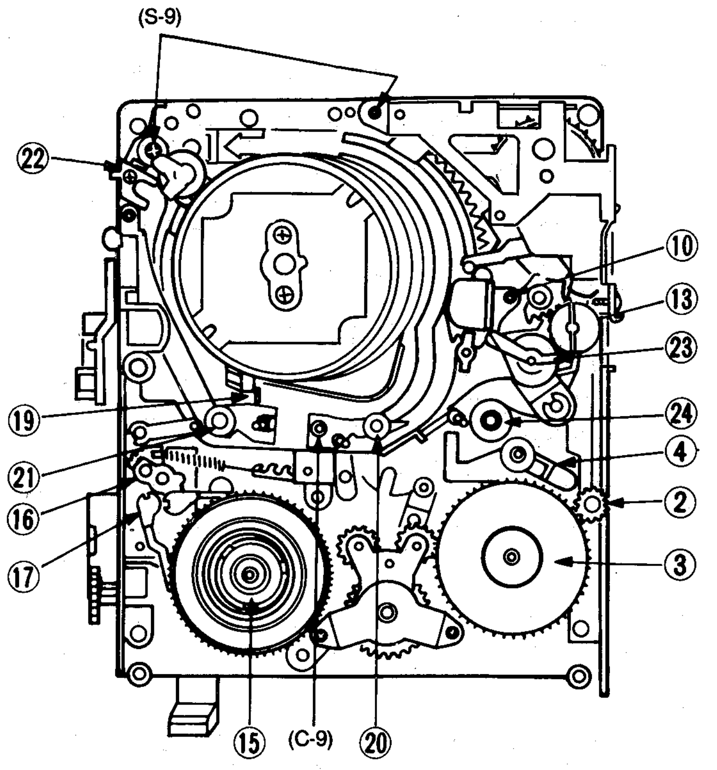

(S-9)
㉒
⑩
⑬
㉓
㉔
④
②
③
⑲
㉑
⑯
⑰
⑮
(C-9)
⑳

Fig. M26

BOTTOM VIEW

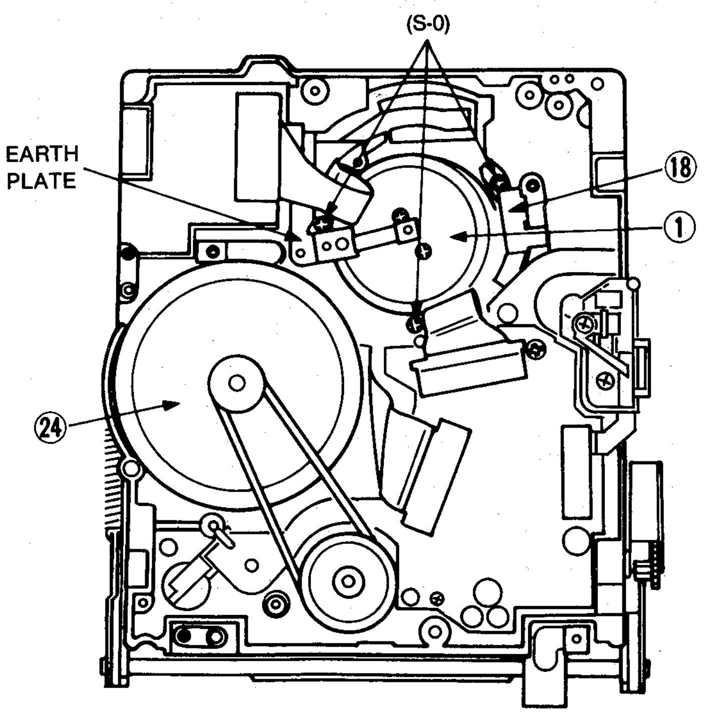

(S-0)
EARTH PLATE
⑱
①
㉔

Fig. M27

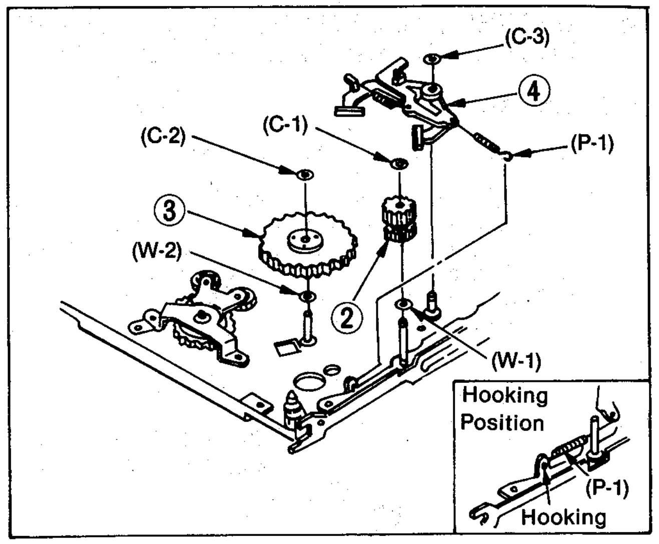

(C-3)
④
(C-2)
(C-1)
(P-1)
③
(W-2)
②
(W-1)
Hooking Position
(P-1)
Hooking

Fig. M28

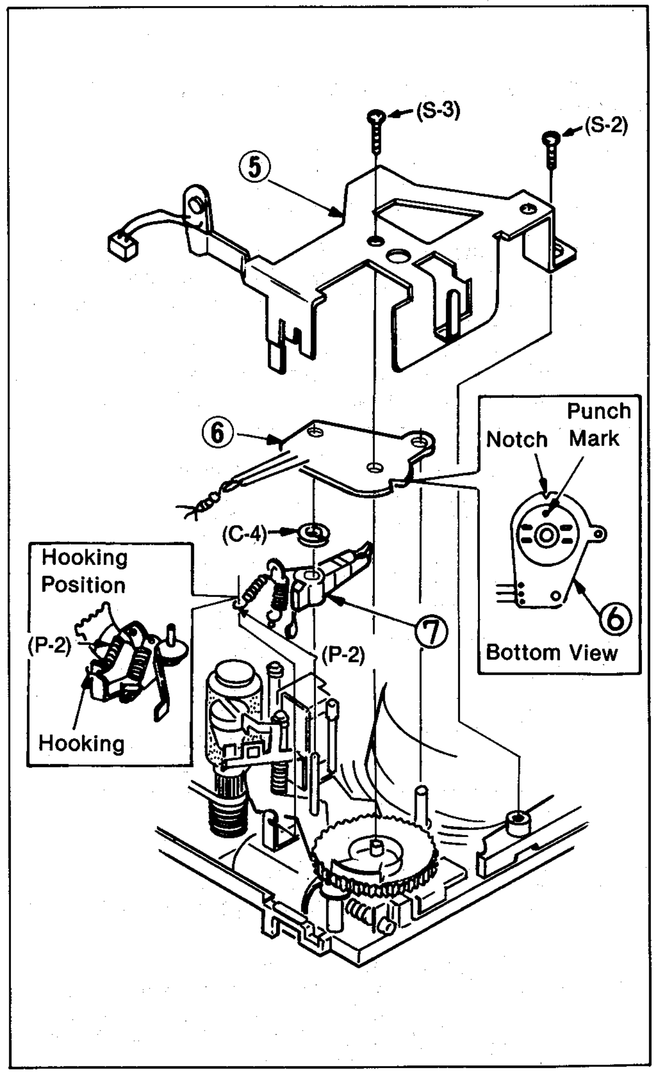

(S-3)
(S-2)
⑤
⑥
Notch
Punch Mark
(C-4)
Hooking Position
⑦
(P-2)
(P-2)
Hooking
⑥
Bottom View

Fig. M29

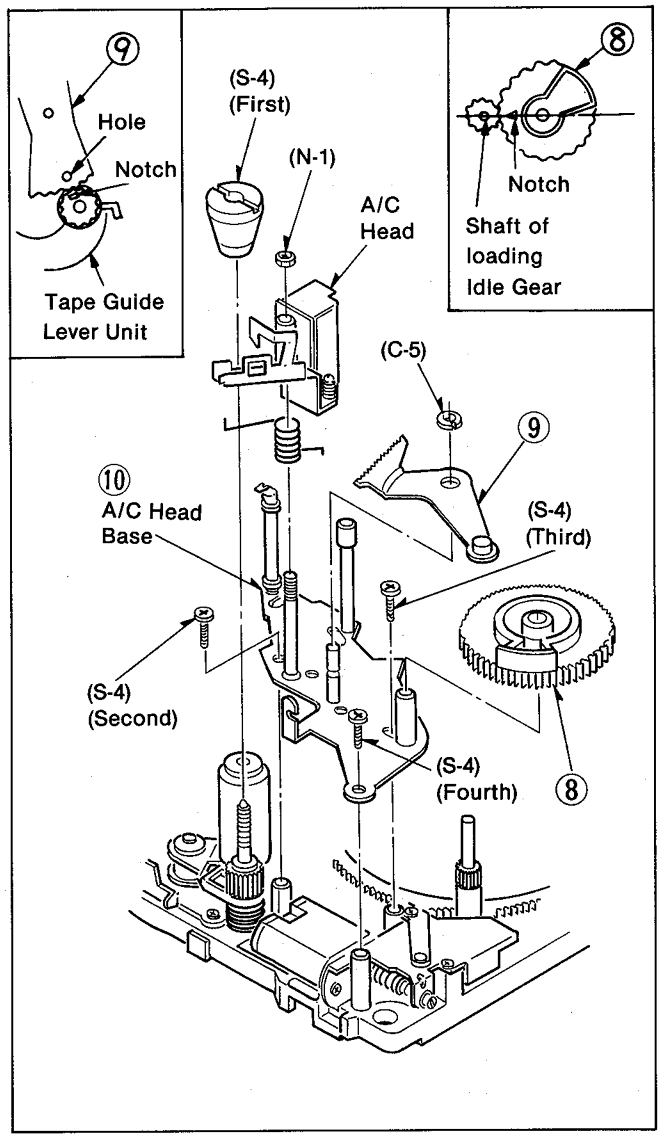
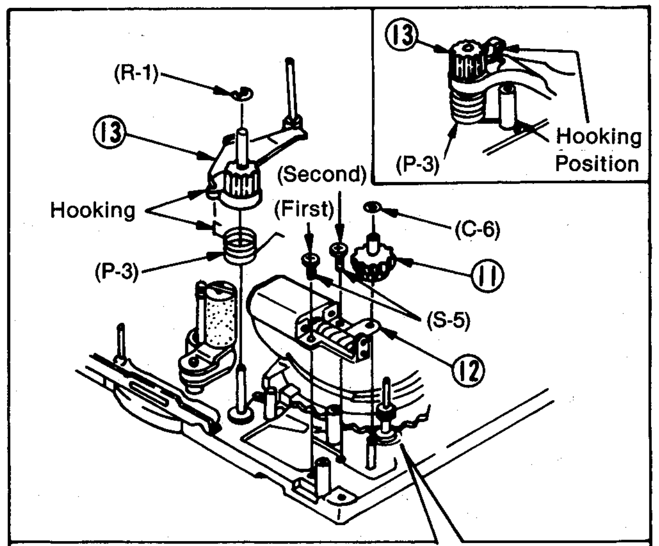

⑨
Hole
Notch
Tape Guide
Lever Unit
(S-4)
(First)
(N-1)
A/C
Head
⑧
Notch
Shaft of
loading
Idle Gear
(C-5)
⑨
⑩
A/C Head
Base
(S-4)
(Third)
(S-4)
(Second)
(S-4)
(Fourth)
⑧

Fig. M30


(R-1)
⑬
Hooking
(P-3)
(Second)
(First)
(C-6)
⑪
(S-5)
⑫
⑬
(P-3)
Hooking
Position

Align the hole of Gear with the hole in chassis.

▨|▨ Loading Drive Gear S

▨|▨ Chassis

Fig. M31

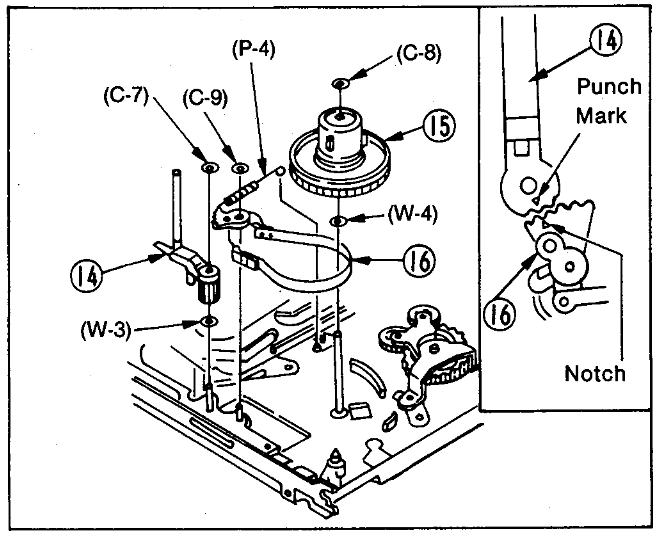

(P-4)
(C-8)
(C-7)
(C-9)
⑮
(W-4)
⑯
⑭
(W-3)
⑭
Punch
Mark
⑯
Notch

Fig. M32

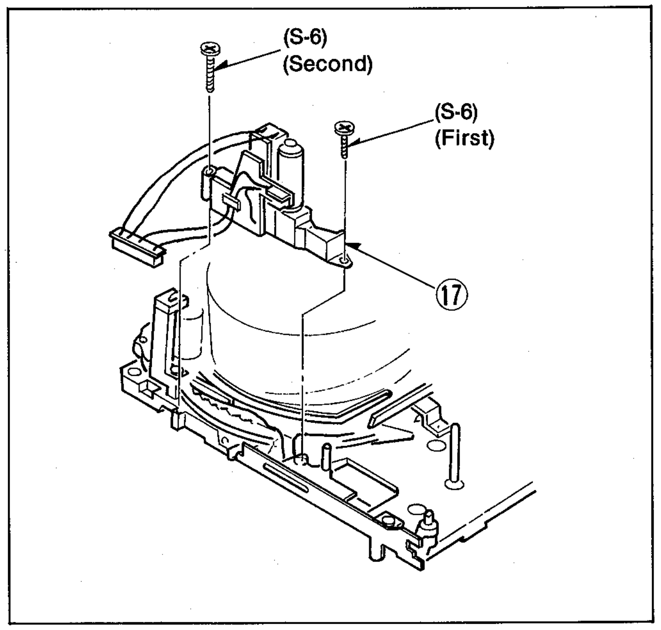

(S-6)
(Second)
(S-6)
(First)
⑰

Fig. M33

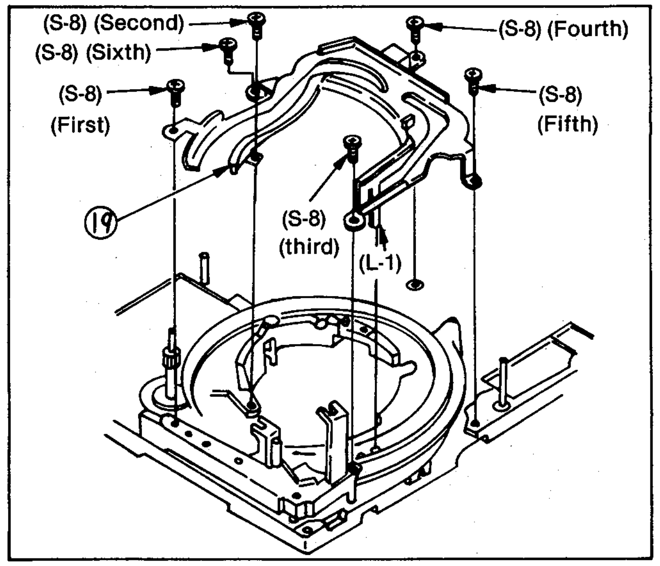

(S-8) (Second)
(S-8) (Sixth)
(S-8)
(First)
(S-8) (Fourth)
(S-8)
(Fifth)
⑲
(S-8)
(third)
(L-1)

Fig. M34

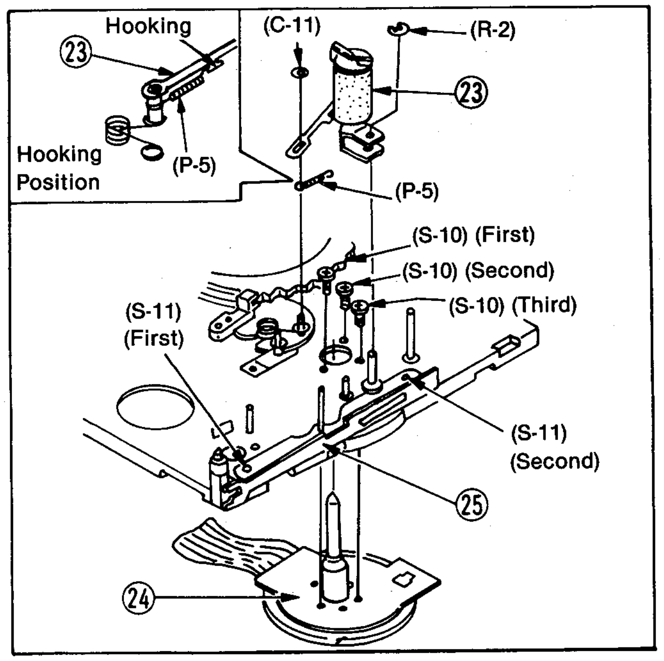

Hooking
㉓
Hooking
Position
(P-5)
(C-11)
(R-2)
㉓
(P-5)
(S-10) (First)
(S-10) (Second)
(S-10) (Third)
(S-11)
(First)
(S-11)
(Second)
㉕
㉔

Fig. M35

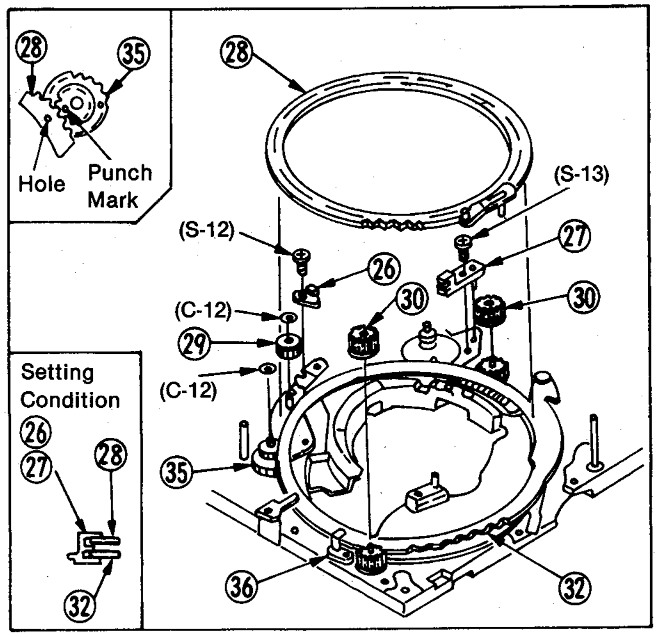
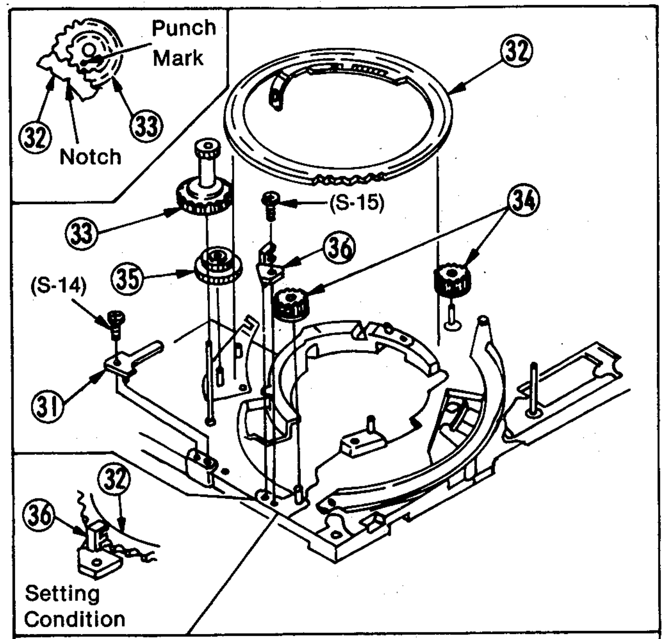

㉘
㉟
Hole
Punch
Mark
㉘
(S-13)
(S-12)
㉖
㉗
(C-12)
㉚
㉚
㉙
(C-12)
Setting
Condition
㉖
㉗
㉘
㉜
㉟
㊱
㉜

Fig. M36


Punch
Mark
㉜
㉝
Notch
㉜
㉝
(S-15)
㉞
(S-14)
㉟
㊱
㉛
㊱
㉜
Setting
Condition

Align the hole of Gear with the hole in chassis.

▨|▨ ㉝,㉟

▨|▨ Chassis

Fig. M37

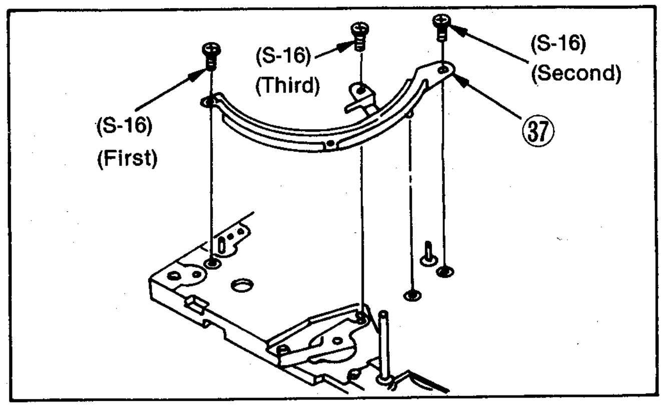
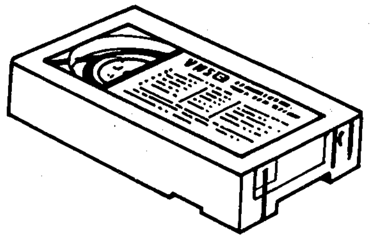
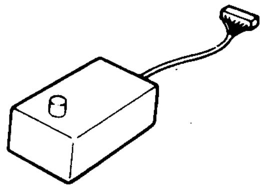
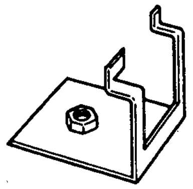
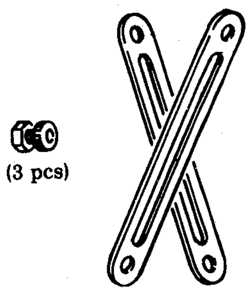
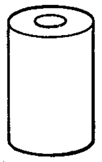
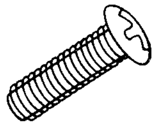

(S-16)
(Third)
(S-16)
(Second)
(S-16)
(First)
㊲

Fig. M38

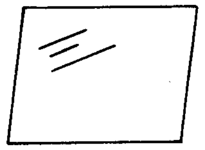
Reference's <Notes> in Table 7 :

1. This Cut Washer is not reusable. If removed, install a new one.
2. In each figure, tighten the screws in the order indicated in the diagram.
3. Remove the shield cover over the PG Pickup to allow the release of (L−1).

Service Fixtures & Tools

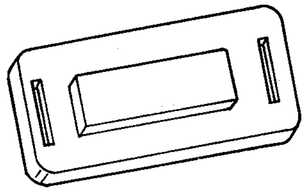
VFM8180H8PF VHS-C Alignment Tape 	**VFK0304** Y/C Separator 	**VFK0382** CAMERA HOLDER 
VFK0431 Camera Holder Arm  	**VFK0432** Holder Spacer 	**XSN26+18** Screw 

VFK0374 (C12)
VFK0375 (C2)
VFK0547 (C8)

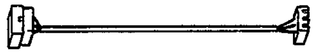
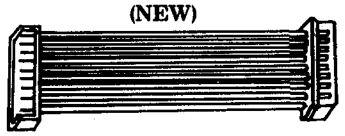
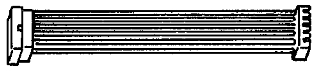
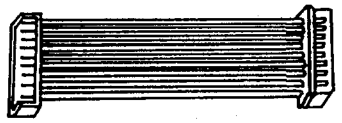
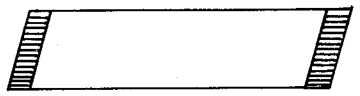
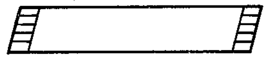
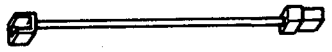
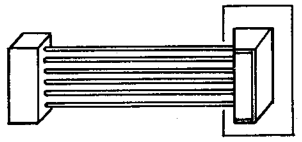
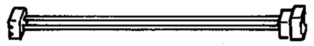
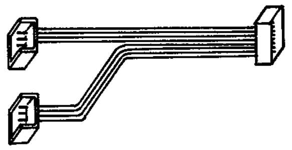
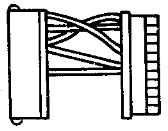


Colour Temperature Conversion Filter

VKW1049 Diffusion Plate



Extension Cables

Camera Section	VTR Section
VFKS0051 Extension Cable (3P) 	**VEK0607** Extension Cable (26P) (NEW) 
VFKS0052 Extension Cable (6P) 	**VFKS0067** Extension Cable (20P) 
VFK0430 Extension Cable (14P) 	
VFK0503 Extension Cable (5P) 	**VFKS0060** Extension Cable (2P) 
VFK0380 Extension Cable (18P) 	**VFK0499** Extension Cable (3P) 
VFK0497 Extension Cable (6P) 	**VFKS0074** Connector 

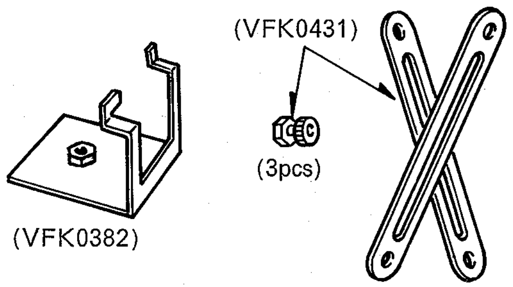
2-4. ELECTRICAL ADJUSTMENT PROCEDURES

2-4-1. ELECTRICAL ADJUSTMENT FOR CAMERA SECTION

TEST EQUIPMENT AND TOOLS

The following equipment is required for adjustment of the CAMERA section.

1. Oscilloscope
   Dual Trace, 50MHz, 2mV/DIV,
   10 : 1 Probe
   1 : 1 Probe
2. Digital Volt Meter or VTVM
3. Frequency Counter
4. Vectorscope
5. Light Meter
6. Tripod
7. Colour Video Monitor
8. Lighting
   140 foot-candles (1400lux), on the chart surface 3200 degrees K.
9. Reflection Chart
   *Logarithmic Gray Scale Chart
   *Colour Chip Chart
   *Ball Chart
   (Part No. : YWV2100RB03)
   *Hunting Chart
   (Part No. : VFK0546)
   *White Chart (Card)
   (Part No. : VFK0546)
   *J Chart
   (Part No. : YWV2100RB03)
   *B/W Chart
   (Part No. : VFK0546)
   *Gray-White Chart
   (Part No. : VFK0546)
   *Colour Bar Chart
   (Part No. : VFKS003B)
10. Plastic Tip Driver
11. Camera Unit Holder
    (Part No. : VFK0382)
12. Camera Holder Arm
    (Part No. : VFK0431)



CAMERA UNIT HOLDER AND
CAMERA HOLDER ARM

Fig. C1

13. Colour temperature conversion filter
    *C12 Filter (Part NO. : VFK0374)
    *C2 Filter (Part NO. : VFK0375)
    *C8 Filter (Part NO. : VFK0547)
14. Camera Extension Cables
    *Extension Cable (3P) (Part No. : VFKS0051)
    *Extension Cable (6P) (Part No. : VFKS0052)
    *Extension Cable (14P) (Part No. : VFK0430)
    *Extension Cable (5P) (Part No. : VFK0503)
    *Extension Cable (18P) (Part No. : VFK0380)
    *Extension Cable (6P) (Part No. : VFK0497)

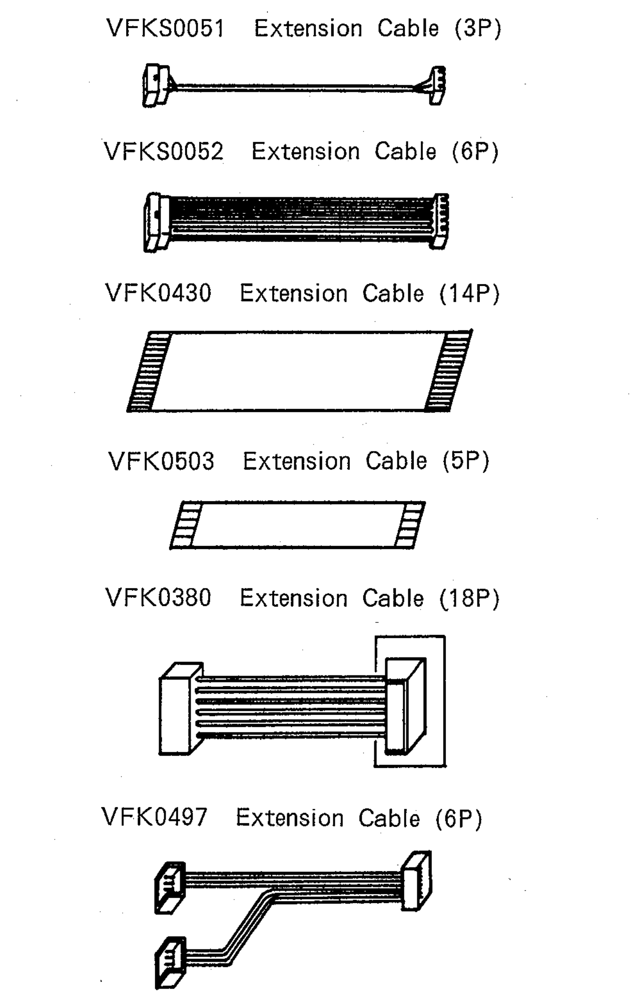

VFKS0051 Extension Cable (3P)
VFKS0052 Extension Cable (6P)
VFK0430 Extension Cable (14P)
VFK0503 Extension Cable (5P)
VFK0380 Extension Cable (18P)
VFK0497 Extension Cable (6P)

Fig. C2

PREPARATION

1). Remove the Side Case (L) and Side Case (R) from the Unit.
(Refer to the Disassembly Section.)
2). Mount the Camera Unit on the tripod using the Camera Unit Holder (VFK0382) and Camera Holder Arm (VFK0431).
3). Connect the Camera Unit, Video Recorder Unit, AC Adaptor, Camera Operation Unit and Colour Monitor TV as shown in Fig. C3.
4). Remove the flexible Cable (Which is connected between FP306 and P3504).
5). Connect the Extension cable (VFK0430) between FP306 and P3504.
6). Set the camera unit to tripod using camera holder (VFK0382) and camera holder arm (VFK0431). (refer to Technical Information).

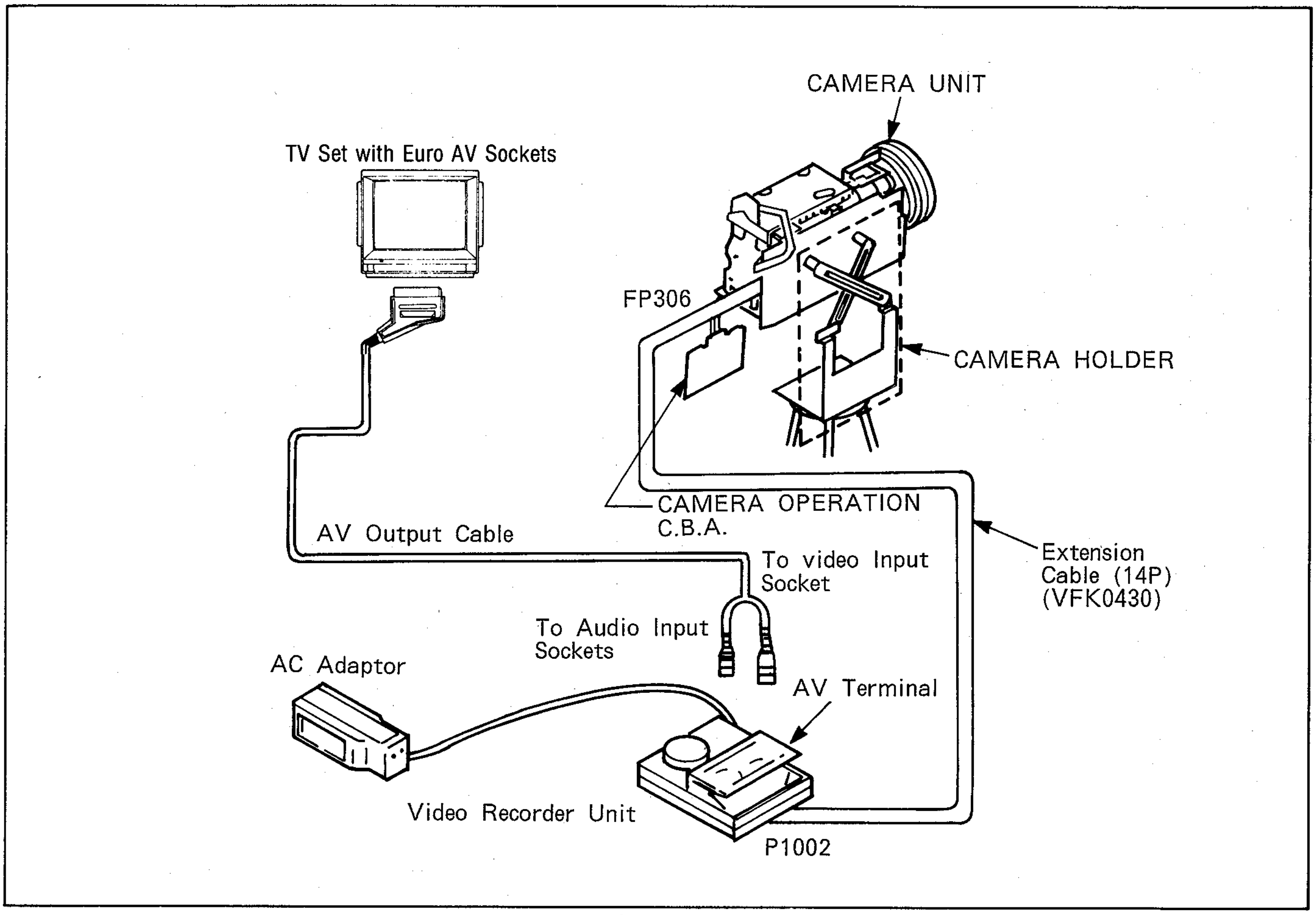

CAMERA UNIT
TV Set with Euro AV Sockets
FP306
CAMERA HOLDER
CAMERA OPERATION C.B.A.
AV Output Cable
To video Input Socket
Extension Cable (14P) (VFK0430)
To Audio Input Sockets
AC Adaptor
AV Terminal
Video Recorder Unit
P1002

Fig. C3

Note:

<STANDARD SETTING FOR CAMERA ADJUSTMENT>

If there is no switch setting indication in adjustment procedures, set the camera switch as follows :

1) White Balance Switch --- Inddor
   Auto Focus ------------- OFF
   High Speed Shutter ------ OFF
2) For trigger oscilloscope, use video output terminal FP306-7.
3) Use 3200 degrees Kelvin light source to light.
4) Service work for camera unit must be performed in a dust free loction to maintain lens cleanliness.

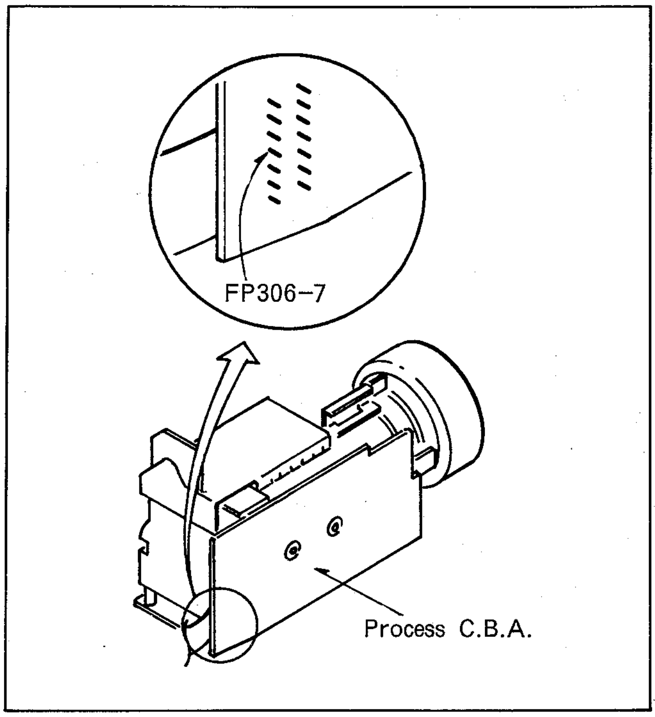

FP306-7
Process C.B.A.

Fig. C4-1

HOW TO USE CAMERA HOLDER ARM (VFK0431)

This Camera Holder Arm which is adjustable the span must be mounted to VFK0382 and it can be used with VFK0432 for camera adjustment or checking.

(A) –––	VFK0432	Holder Spacer (2pcs.)
(B) –––	VFK0431	Camera Holder Arm
(C) –––	XSN26+18	Screw (2pcs.)
(D) –––	VFK0382	Camera Holder

(1) Fix the Holder Arm (4) and (5) temporarily by screw (1) as shown in Fig. C4–2.
(2) Mount the Camera Holder Arm (B) to the Camera Holder (D) by screws (2) and (3) as shown in Fig. C4–3.
(3) Tighten the screws (C) with the Holder Spacers (A) as shown in Fig. C4–2.

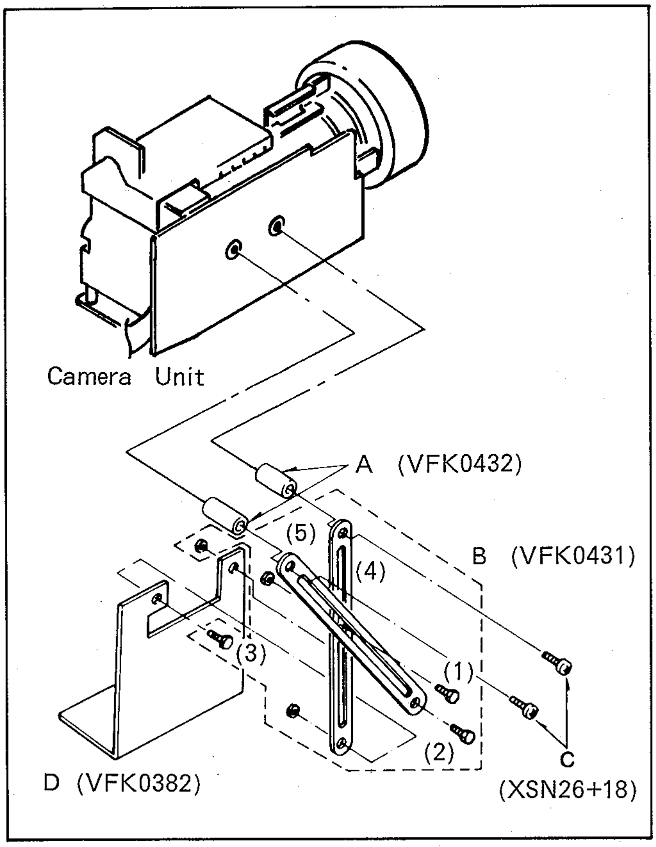

Camera Unit
A (VFK0432)
(5)
(4)
B (VFK0431)
(3)
(1)
(2)
C
(XSN26+18)
D (VFK0382)

Fig. C4–2

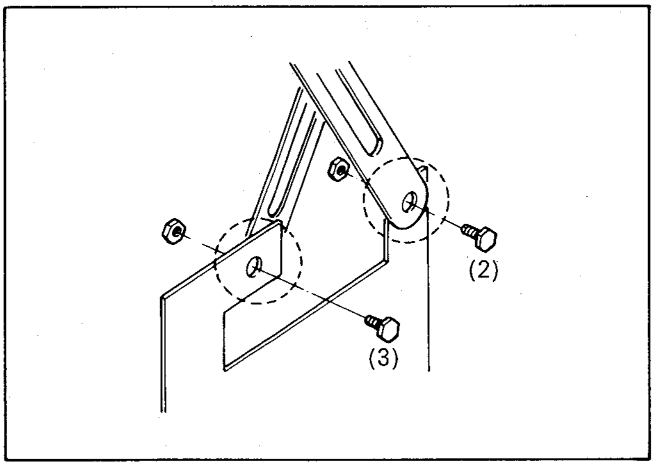
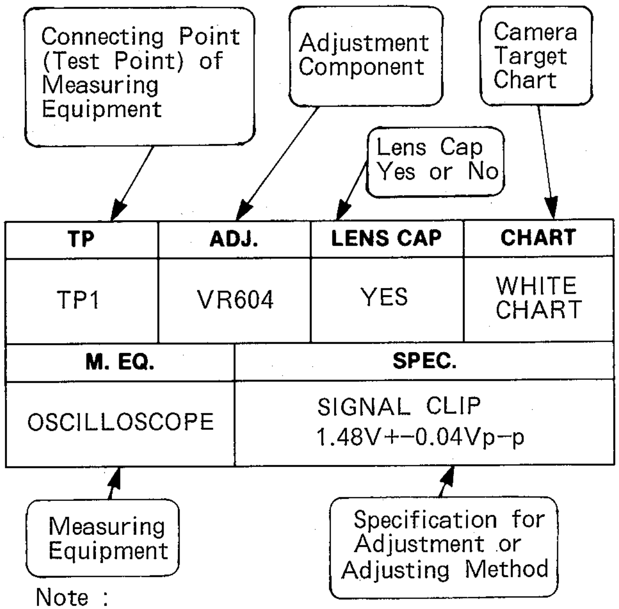


Fig. C4–3

HOW TO READ THE ADJUSTMENT PROCEDURES


Connecting Point (Test Point) of Measuring Equipment
Adjustment Component
Camera Target Chart
Lens Cap Yes or No
Measuring Equipment
Specification for Adjustment or Adjusting Method

TP	ADJ.	LENS CAP	CHART
TP1	VR604	YES	WHITE CHART

M. EQ.	SPEC.
OSCILLOSCOPE	SIGNAL CLIP 1.48V+–0.04Vp–p

Note :
If ☒ appears in any block, this means it is not used or not important.

Fig. C5–1

CCD DRIVE SECTION

1. BACK FOCUS ADJUSTMENT
2. PLL FREQUENCY ADJUSTMENT
3. V-SUB ADJUSTMENT
4. CCD OUTPUT ADJUSTMENT

PROCESS SECTION

5. ALC ADJUSTMENT
6. AGC ADJUSTMENT
7. PEDESTAL LEVEL ADJUSTMENT
8. Y 1H/2H DELAY LEVEL ADJUSTMENT
9. YH LEVEL ADJUSTMENT
10. VCO OSCILLATOR LIMITER ADJUSTMENT
11. BELL FILTER ADJUSTMENT

Ⓐ

Ⓐ

12. VID PULSE LEVEL ADJUSTMENT
13. fH/2 LEVEL COMPENSATION ADJUSTMENT
14. CARRIER BALANCE AND BLACK PEDESTAL ADJUSTMENT
15. CHROMA 1H/2H DELAY LEVEL ADJUSTMENT
16. INDOOR WHITE BALANCE ADJUSTMENT
17. OUTDOOR WHITE BALANCE ADJUSTMENT
18. AWB OFFSET ADJUSTMENT
19. COLOUR PHASE AND R-Y/B-Y GAIN ADJUSTMENT
20. HIGH INTENSITY SUPPRESS ADJUSTMENT
21. AWT MODE (OFFSET) ADJUSTMENT
22. AWT MODE (GAIN) ADJUSTMENT
23. LOW LIGHT CHROMA SUPPRESS ADJUSTMENT

AUTO FOCUS SECTION

24. AF GAIN ADJUSTMENT
25. BIMOLF GAIN CONTROL ADJUSTMENT
26. AF AMP BIAS GAIN ADJUSTMENT
27. AF VH FREQUENCY ADJUSTMENT

Fig. C5–2

CCD DRIVE SECTION

1. BACK FOCUS ADJUSTMENT

(1) Aim the Camera at the Hunting Chart 3m distance and zoom all the way in (Fully tele position.)
(2) Focus the lens on the object.
(3) Confirm that Focus–ring indicates 3m.
(4) Adjust the relay lens adjustment point as shown in Fig. C6.

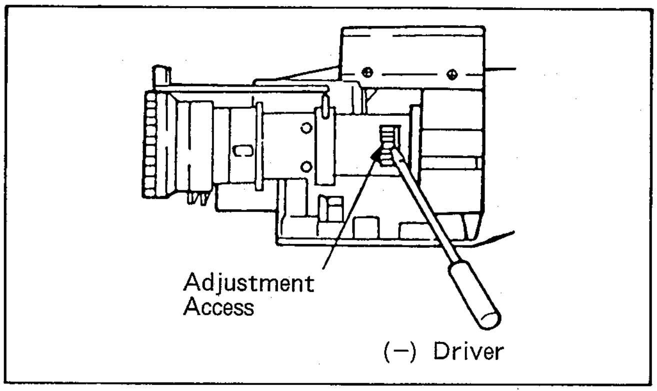


Fig. C6

(5) Zoom all the way back and adjust the back focus pitch so that the sharpest focus is obtained.
(6) Repeat the procedure as follows zoom in, focus, zoom out and adjust until the best focus is obtained over the entire Zoom range.

2. PLL FREQUENCY ADJUSTMENT

(1) Remove the Sensor Shield Case by removing its 2 Screw.

TP	ADJ.	LENS CAP	CHART
PIN 7 OF B201	C206		

M. EQ.	SPEC.
FREQUENCY COUNTER	9.656250Mhz +– 10Hz

Note:
B201, C292 : Sensor C.B.A.

3. V-SUB ADJUSTMENT

TP	ADJ.	LENS CAP	CHART
	VR201	NO	HALOGEN LAMP

M. EQ.	SPEC.
MONITOR TV	NO BLOOMING

(1) Zoom all the way in (Fully tele position) and aim the camera at the Halogen Lamp as shown in Fig. C7.

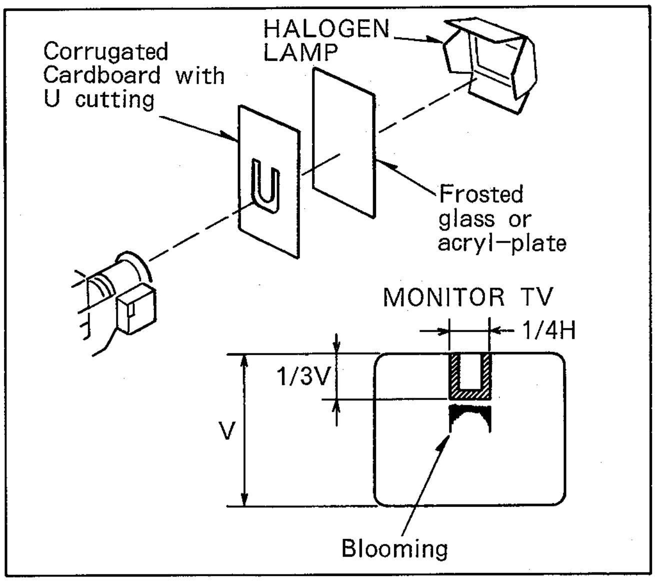

HALOGEN LAMP
Corrugated Cardboard with U cutting
Frosted glass or acryl-plate
MONITOR TV
1/4H
1/3V
V
Blooming

Fig. C7

(2) Set the High Speed Shutter SW to "OFF" portion.
(3) Blind the lighting using frosted glass or acryl plate to diffuse incoming light.
And also put a corrugated cardboard which inside is cut to "U" shape as shown in Fig. C8.
(4) Connect the jumper wire between TP516 and TP520 to open the Iris.
(5) Adjust VR201 so that blooming is just disappear.
(If blooming is not disappeared completely, adjust until minimum blooming)
(6) High Speed Shutter "ON" and "OFF" both mode, confirm that the monitored picture does not contain the Blooming even if the camera moves as shown in Fig. C8.

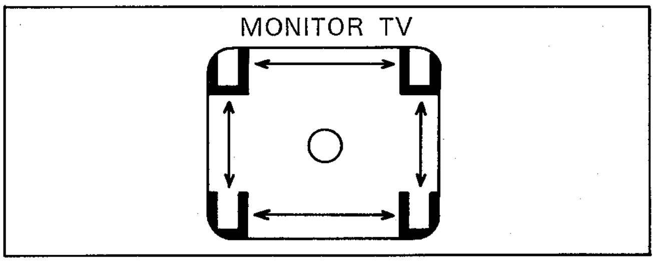


Fig. C8

Note:
J chart is also available for rough adjustment.
(1) Aim the camera at J chart.
(2) Set the lens to fully Tele position.
And set the distance so that lower 1/3 of J chart comes to full picture frame of TV screen.
(3) Connect the jumper wire between TP516 and TP520 to open the Iris.
(4) Adjust the VR201 so that blooming is just disappeared.

4. CCD OUTPUT ADJUSTMENT

TP	ADJ.	LENS CAP	CHART
TP201	VR202	NO	J CHART
M. EQ.		**SPEC.**	
OSCILLOSCOPE		180mV+-10mV	

Note1:
TP201, VR202 : Sensor C.B.A.
TP515, VR327 : Process C.B.A.

(1) Aim the camera to J chart.
(2) Adjust the VR327 (Iris control) so that voltage at TP515 becomes 300mV+-10mV.
(3) Adjust the VR202 (CCD OUT control) so that level "A" becomes 180mV+-10mV as shown in Fig. C9.

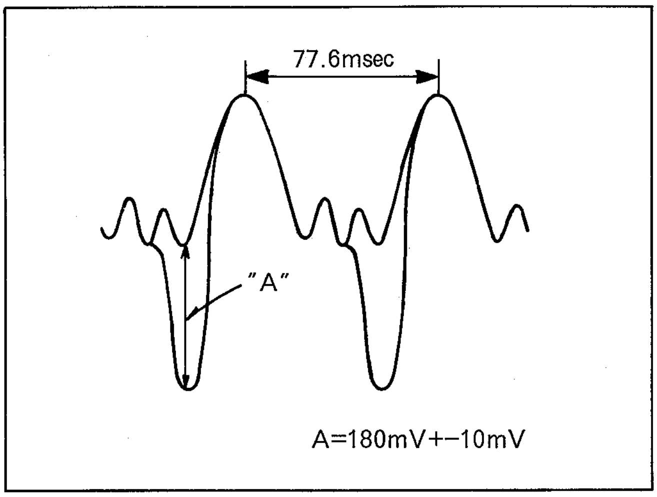


Fig. C9

PROCESS SECTION

5. ALC ADJUSTMENT

TP	ADJ.	LENS CAP	CHART
TP515	VR327	NO	GRAY SCALE CHART
M. EQ.		**SPEC.**	
OSCILLOSCOPE		0.28V+-0.02Vp-p	

Note:
TP515, VR327 : Process C.B.A.

(1) Set the Iris VR to centre fix position.
(2) Aim the camera at the gray scale chart.
(3) Connect the scope to TP515 and trigger with Pin 7 of FP306 (H-Rate).
(4) Adjust the Camera Unit to obtain 40usec picture frame as shown in Fig. C10.
(5) Adjust the Auto Iris Control (VR327) so that the signal level is 0.28V+-0.02Vp-p.

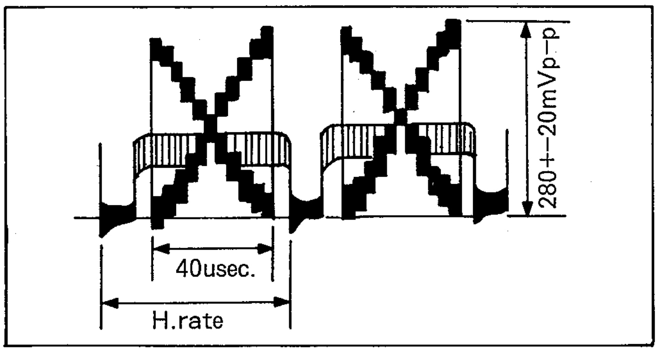


Fig. C10

6. AGC ADJUSTMENT

TP	ADJ.	LENS CAP	CHART
TP514	VR324	NO	GRAY SCALE CHART

M. EQ.	SPEC.
OSCILLOSCOPE	0.30V+−0.02Vp−p

Note 1:
TP514, VR324 : Process C.B.A.

Note 2:
Confirm that voltage at TP523 is less than 3V If not, adjust Iris VR.

(1) Aim the camera at the gray scale chart.
(2) Connect the scope to TP2 and trigger with Pin 7 of FP306 (H−Rate).
(3) Adjust the Camera Unit to obtain 40usec picture frame as shown in Fig. C11.
(4) Adjust the AGC Control (VR324) so that the signal level is 0.30V+−0.02Vp−p.

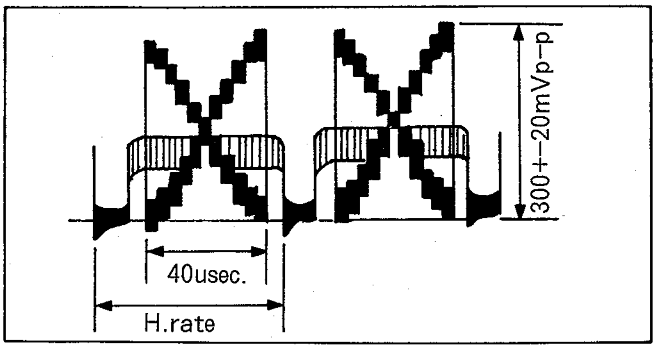


Fig. C11

7. PEDESTAL LEVEL ADJUSTMENT

TP	ADJ.	LENS CAP	CHART
TP514	VR301	YES	

M. EQ.	SPEC.
OSCILLOSCOPE	SIGNAL LEVEL EQUALS THE BLANKING (BLANK) LEVEL.

Note:
TP514, VR301 : Process C.B.A.

(1) Cover the Camera Lens with the Lens Cap.
(2) Connect the scope to TP514 and trigger with Pin 7 of FP306 (H−Rate).
(3) Adjust the Pedestal Level Control (VR301) so that the signal level equals the BLK level as shown in Fig. C12.

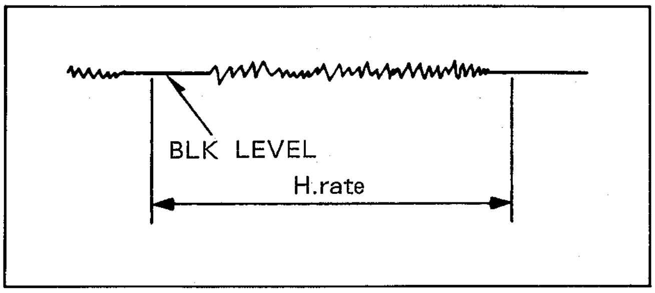


Fig. C12

8. Y 1H/2H DELAY LEVEL ADJUSTMENT

TP	ADJ.	LENS CAP	CHART
YQ1,YZ2,YZ3 (TEST ROUND)	VR320 VR318	NO	GRAY SCALE

M. EQ.	SPEC.
OSCILLOSCOPE	0+−4.5mVp−p

Note:
VR320, YQ1, YZ2, YZ3 : PROCESS C.B.A.
(The gain CHA, CHB for oscilloscope should be same)

(1) Aim the camera at gray scale chart.
(2) Connect the oscilloscope to YQ1 (CHA) and YZ2 (CHB).
(3) Set the CHB for "INVERT" mode.
(4) Set the oscilloscope for "ADD" mode.
(5) Adjust the 1H delay level control (VR320) so that waveform becomes 0+−4.5mVp−p as shown below.
(6) Reconnect the CHB probe to YZ3, (CHA is still connecting to TS5 CHB : INVERT mode. oscilloscope : ADD mode.)
(7) Adjust the 2H delay level control (VR318) so that waveform becomes 0+−4.5mVp−p as shown below.

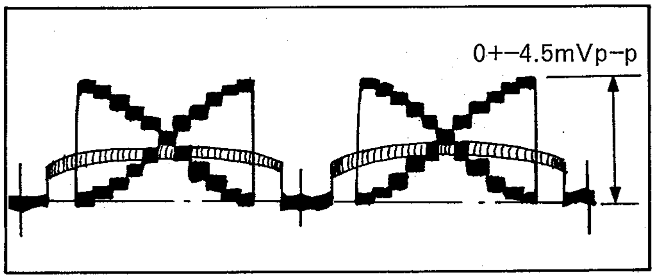


Fig. C13−1

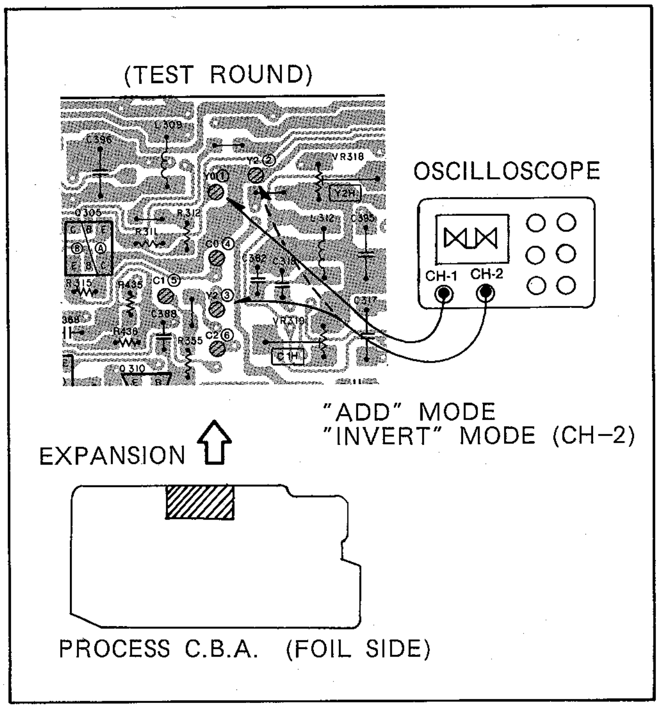

(TEST ROUND)
L309
C396
VR318
Y2H
L312
C385
C382
C318
C317
R312
R311
R315
R435
R436
R355
C388
VR319
C1H
Q306
Q310
OSCILLOSCOPE
CH-1
CH-2
"ADD" MODE
"INVERT" MODE (CH-2)
EXPANSION
PROCESS C.B.A. (FOIL SIDE)

Fig. C13-2

9. YH LEVEL ADJUSTMENT

TP	ADJ.	LENS CAP	CHART
PIN 7 OF FP306	VR315	NO	GRAY SCALE CHART
M. EQ.	**SPEC.**		
OSCILLOSCOPE	B/A = 2.33+-0.15		

Note:
VR315, FP306 : Process C.B.A.

(1) Aim the camera at the gray scale chart.
(2) Connect the scope to pin 7 of FP306.
(3) Adjust the YH Level Control (VR315) so that the signal level "B/A" is 2.33+-0.15as shown in Fig. C14.

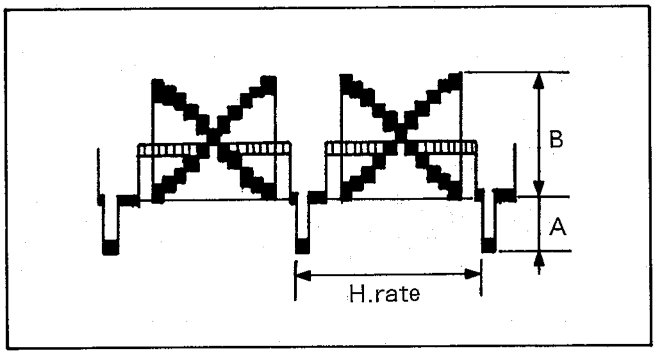


Fig. C14

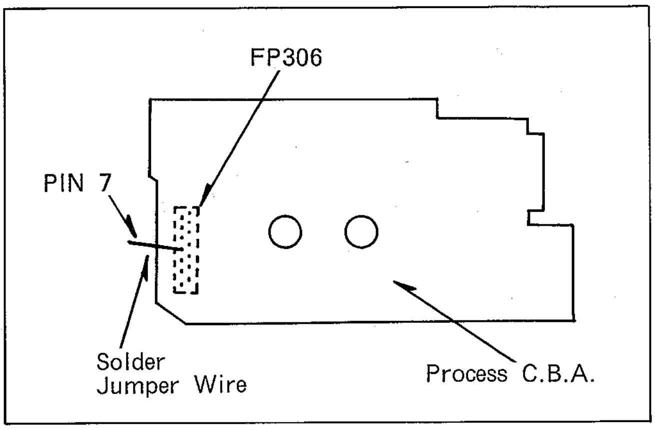

FP306
PIN 7
Solder
Jumper Wire
Process C.B.A.

Fig. C15

10. VCO OSCILLATOR LIMITER ADJUSTMENT

TP	ADJ.	LENS CAP	CHART
VIDEO OUTPUT	VR633 VR634	YES	
M. EQ.		**SPEC.**	
VECTOR SCOPE		REFER TO FIG. C17	

(1) Cover the camera lens with Lens Cap.
(2) Keep the Fade Out condition by pushing "FONDU" button to cut the colour difference signal.
(3) Connect the jumper wire between TP633 and TP634.
(4) Supply the video signal taken from the VCR section to the vectorscope. (refer to Fig. C16)

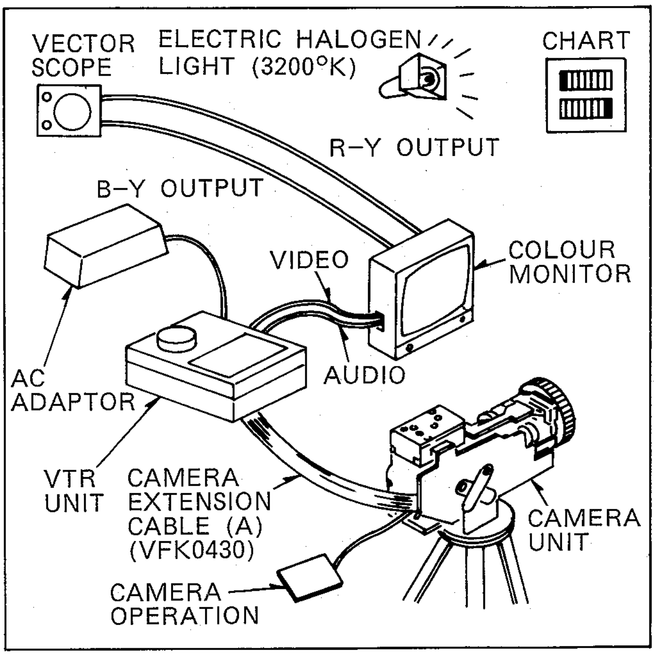

VECTOR SCOPE
ELECTRIC HALOGEN LIGHT (3200°K)
CHART
R-Y OUTPUT
B-Y OUTPUT
VIDEO
COLOUR MONITOR
AUDIO
AC ADAPTOR
VTR UNIT
CAMERA EXTENSION CABLE (A) (VFK0430)
CAMERA UNIT
CAMERA OPERATION

Fig. C16

(5) Adjust the VCO oscillation limit controls (VR633 and VR634) so that Ident signal vector comes into specific squar (10mm x 12mm) on vector scpope as shown below.

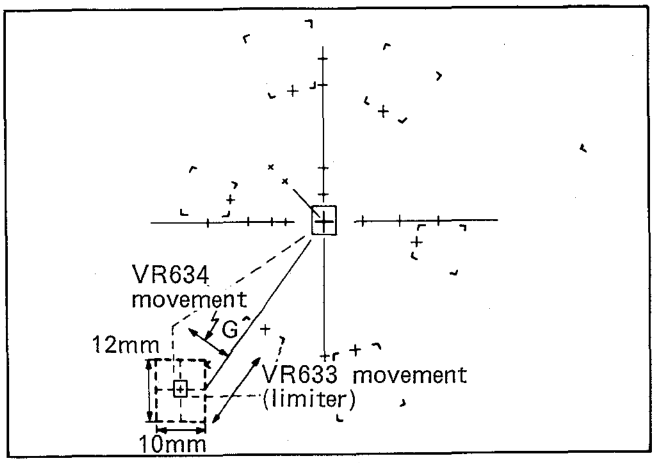


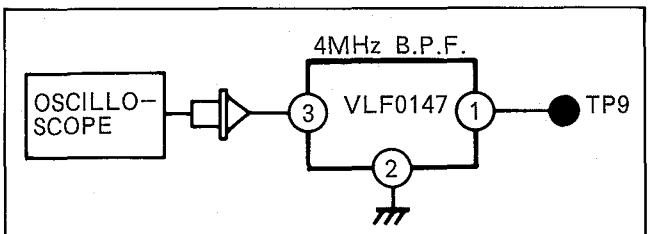
Fig. C17

(6) In case that vector of signal is out of squar (limiter direction) when jumper wire is removed, readjust the VR633 that vector comes into square.

11. BELL FILTER ADJUSTMENT

TP	ADJ.	LENS CAP	CHART
TP631 TP632	L633	YES	
M. EQ.		SPEC.	
OSCILLOSCOPE SIGNAL GENERATOR		MINIMIZED WAVEFORM	

(1) Cover the camera lens with Lens Cap.
(2) Connect the jumper wire between input (R637 side) of FL631 and GND.
(3) Supply the 4.286MHz sine wave signal (from signal generator) to TP631.
If you do not have signal generator for 4.286MHz, please refer to Note 1.
(4) Make the connection (JIG) as shown below.
(5) Adjust the BELL FILTER control (L633) so that signal become minmum.



VLF0348 is also avilable instead of VLF0147.

Fig. C18

Note 1: WITH MONITOR

TP	ADJ.	LENS CAP	CHART
VIDEO OUTPUT	L633	NO	CHART COLOUR CHIP
M. EQ.		SPEC.	
TV MONITOR		COLOUR ERRORIS ELIMINATED	

(1) Aim the camera at the colour chip chart.
(2) Observe the pictur on the colour monitor and adjust the BELL FILTER control (L633) so that right side edges colour error of all colour are elminated (minimized).

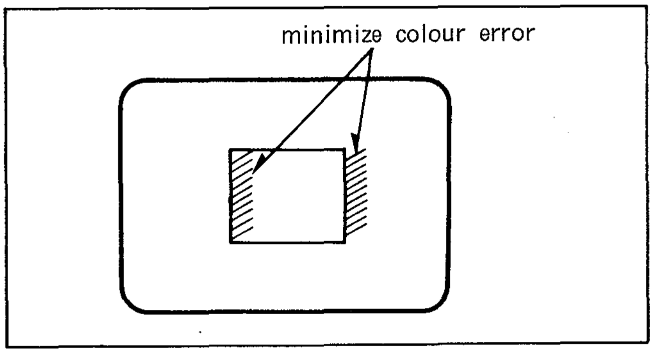


Fig. C19

12. VID PULSE LEVEL ADJUSTMENT

TP	ADJ.	LENS CAP	CHART
TP632	VR632	YES	
M. EQ.		SPEC.	
OSCILLOSCOPE		460mV+–40mV	

Note:
VCO oscillation limitter Adj. must be completed before this adjustment.

(1) Cover the camera lens with Lens Cap.
(2) Connect the oscilloscope to TP632.
(3) Adjust the VID pulse level control (VR632) so that VID pulse level is 460mv+–40mv.

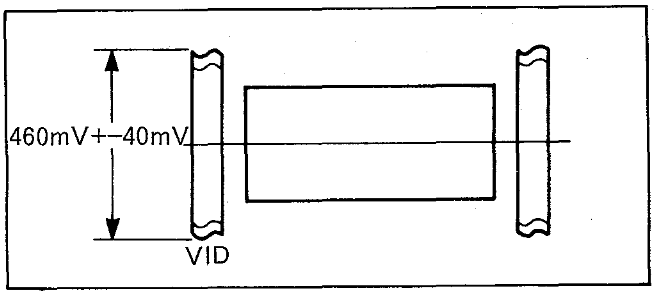


Fig. C20

13. fH/2 LEVEL COMPENSATION ADJUSTMENT

TP	ADJ.	LENS CAP	CHART
VIDEO OUTPUT	VR330	YES	

M. EQ.	SPEC.
VECTORSCOPE	CENTER OF VECTORSCOPE

(1) Cover the Camera Lens with the Lens Cap.
(2) Connect the jumper wire between centre of VR324 and TP511.
(3) Adjust the FH/2 Level Compensation Control (VR330) so that the colour vectors are minimum shaking on vectorscope.

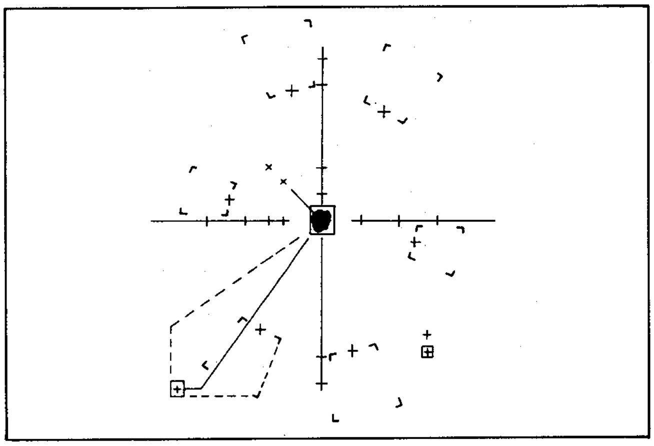


Fig. C21

14. CARRIER BALANCE AND BLACK PEDESTAL ADJUSTMENT

TP	ADJ.	LENS CAP	CHART
VIDEO OUTPUT	VR305 VR306 VR303 VR304	YES	

M. EQ.	SPEC.
VECTORSCOPE	CENTER OF VECTORSCOPE
OSCILLOSCOPE	WAVEFORM IS MINIMIZED

Note:
VR305, VR306, VR303, VR304 : Process C.B.A.
TP511, TP512, TP513, TP522, TP511

WITH VECTORSCOPE

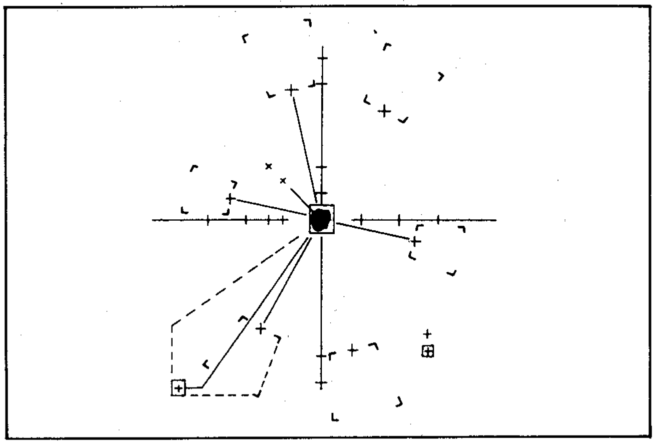


Fig. C22

(1) Cover the Camera Lens with the Lens Cap.
(2) Connect the jumper wire between centre of VR324 between TP511.
(3) Adjust the Black Pedestal Controls (VR305, VR306) so that the colour vectors at the centre of screen on vectorscope.
(4) Disconnect the jumper wire.
(5) Adjust the Carrier Balance Controls (VR303, VR304) so that the colour vectors collect at the centre of screen on the vectorscope.

WITH OSCILLOSCOPE

(1) Adjustment condition and procedure are same as using vectorscope.
(2) Adjust VR305, and VR306, first and Adjust VR303, VR304 next so that the waveform is minimized as shown in Fig. C26.

15. CHROMA 1H/2H DELAY LEVEL ADJUSTMENT

TP	ADJ.	LENS CAP	CHART
C04, C15, C26 (TEST ROUND)	VR319 VR317	YES	

M. EQ.	SPEC.
OSCILLOSCOPE	0+−4.5mV

(1) Cover the camera lens with the lens cap.
(2) Supply the "WHD" signal (B305−2 : process C.B.A.) to C04 (test round) through the Buffer circuit and adjust VR1 (on Buffer circuit) so that the voltage of C04 (test round) becomes 300mVp−p+−5mVp−p as shown in Fig. C23.

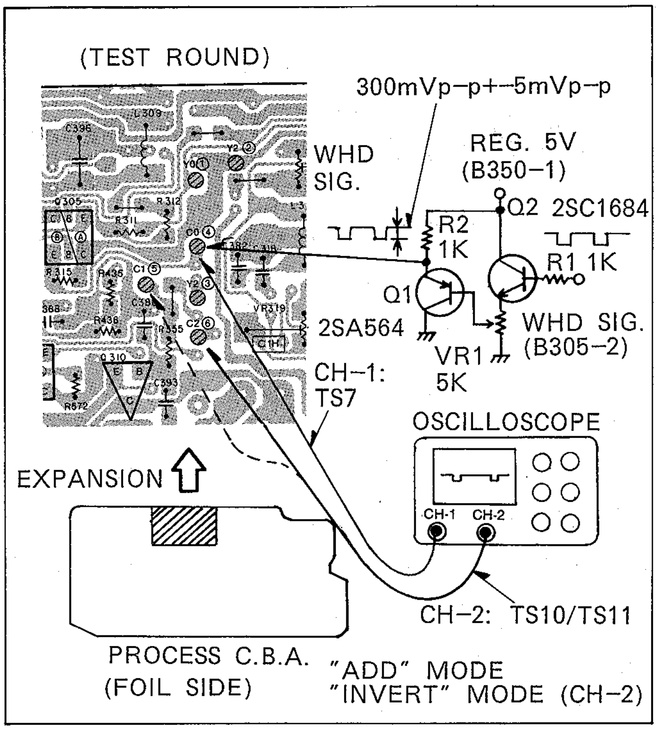

(TEST ROUND)
300mVp–p+–5mVp–p
WHD SIG.
REG. 5V
(B350–1)
Q2 2SC1684
R2 1K
R1 1K
Q1
2SA564
WHD SIG.
(B305–2)
VR1 5K
CH–1: TS7
OSCILLOSCOPE
CH-1
CH-2
EXPANSION
CH–2: TS10/TS11
PROCESS C.B.A.
(FOIL SIDE)
"ADD" MODE
"INVERT" MODE (CH–2)
C396
L309
Y0
Y2
C0
C1
C2
R311
R312
R315
R435
R436
R355
C393
C391
C302
C318
VR319
Q305
Q310
R572

Fig. C23

(3) Set the oscilloscope to "ADD" mode and "INVERT" mode for CH–2.
And connect the oscilloscope CH–1 to C04 (test round) and CH–2 to C15 (test round).
(4) Adjust VR319 so that the level of waveform becomes 0+–4.5mV as shown in Fig. C24.
(5) Connect the oscilloscope CH–1 to C04 (test round) and CH2 to C26 (test round).
(6) Adjust VR317 so that the level of waveform becomes 0+–4.5mVp–p as shown in Fig. C24.

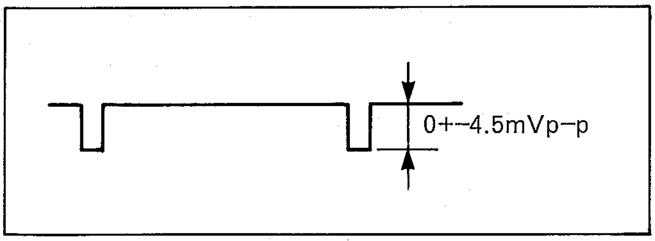


Fig. C24

16. INDOOR WHITE BALANCE ADJUSTMENT

TP	ADJ.	LENS CAP	CHART
VIDEO OUTPUT	VR311 VR312	NO	WHITE CHART
M. EQ.	**SPEC.**		
VECTORSCOPE	CENTER OF VECTORSCOPE		
OSCILLOSCOPE	WAVEFORM IS MINIMIZED		

Note:
VR311, VR312 : Process C.B.A.

WITH VECTORSCOPE

(1) Set the White Balance Switch to "INDOOR" side.
(2) Connect the jumper wire among TP511, TP512 and TP513 on process C.B.A. to cut the R–Y, B–Y feed back loop.
(3) Aim the camera at the White Chart.
(4) Supply the video signal to the vectorscope.
(5) Adjust the White Balance Controls (VR311 and VR312) so that the colour vectors are collected at the centre of screen on the vectorscope as shown in Fig. C25.

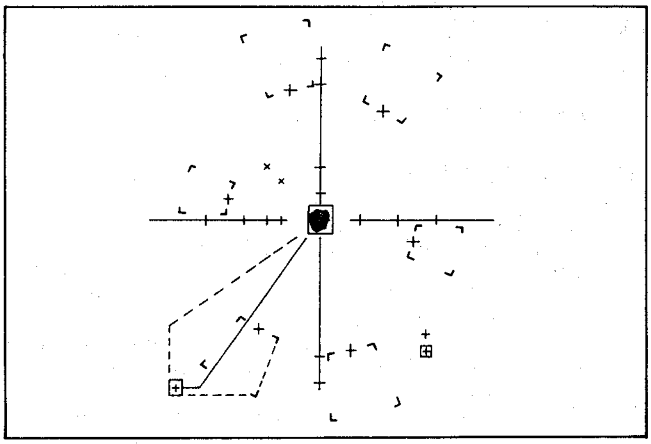


Fig. C25

WITH OSCILLOSCOPE

(1) Adjustment condition and procedure are same as using vectorscope.
(2) Adjust VR311 and VR312 so that the waveform is minimized.

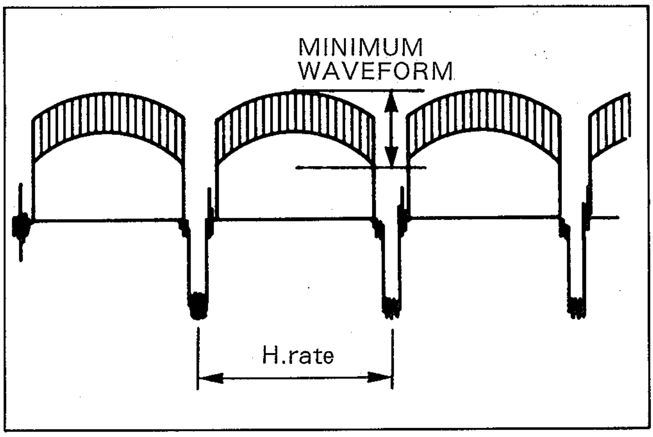

MINIMUM WAVEFORM
H.rate

Fig. C26

17. OUTDOOR WHITE BALANCE ADJUSTMENT

TP	ADJ.	LENS CAP	CHART
VIDEO OUTPUT	VR528 VR529	NO	WHITE CHART
M. EQ.	**SPEC.**		
VECTORSCOPE	CENTER OF VECTORSCOPE		
OSCILLOSCOPE	WAVEFORM IS MINIMIZED		

Note:
VR528, VR529 : Process C.B.A.

WITH VECTORSCOPE

(1) Set the White Balance Switch on the Camera Operation Unit to the "OUTDOOR".
(2) Connect the jumper wire among TP511, TP512 and TP513 on Process C.B.A. to cut the R–Y, B–Y feed back loop.
(3) Aim the camera at the White Chart (lighting should be 3200 degrees K Halogen lamp.)
(4) Supply the video signal to the vectorscope.
(5) Attach the colour temperature conversion filter (VFK0374 and VFK0375) which convert 3200 degrees Kelvin to 5600 degrees Kelvin in front of the lens (Refer to Note 1).
(6) If the colour temperature conversion filter is not available, use a day light source. (Refer to Note 2)
(7) Adjust the White Balance (B–Y) Outdoor Gain and White Balance (R–Y) Outdoor Gain Controls (VR528 and VR529) so that the colour vectors move to the centre of screen on the vectorscope. (Refer to Fig. C27)
(8) Remove the colour temperature conversion filter with the fixture from the lens.
(9) Remove the jumper wire from TP511, TP512, TP513.

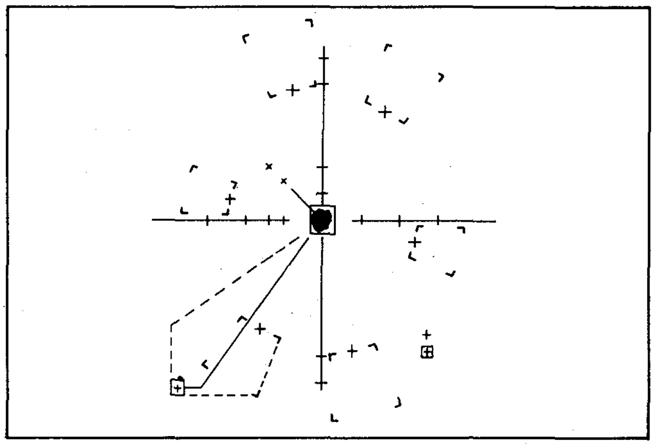


Fig. C27

WITH OSCILLOSCOPE

(1) Adjustment condition and procedure are same as using vectorscope.
(2) Adjust VR528 and VR529 so that the waveform is minimized.

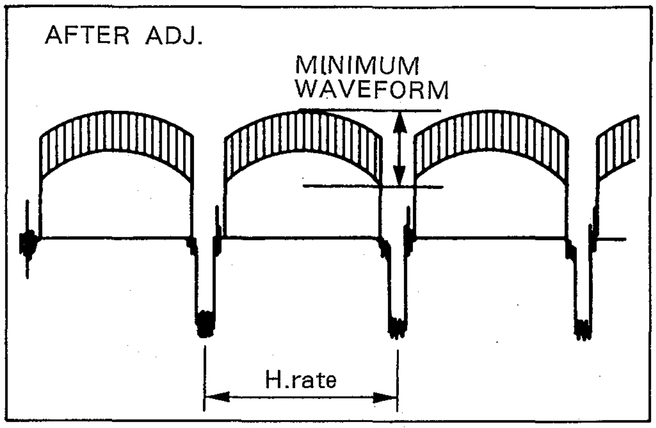


Fig. C28

<How to make a fixture>

a) Print the actual measure an the hard paper referring Fig. C30.
b) Cut the paper along the solid line.
c) Apply the past to the oblique line.
d) Fold the paper along the dotted line.
e) Construct the fixture referring completion drawing as shown in Fig. C30.

Note 1:
Attach the fixture (make a fixture yourself referring measurements and How to make fixture below shown in Fig. C30) to the lens and then set the colour temperature conversion filter to fixture.

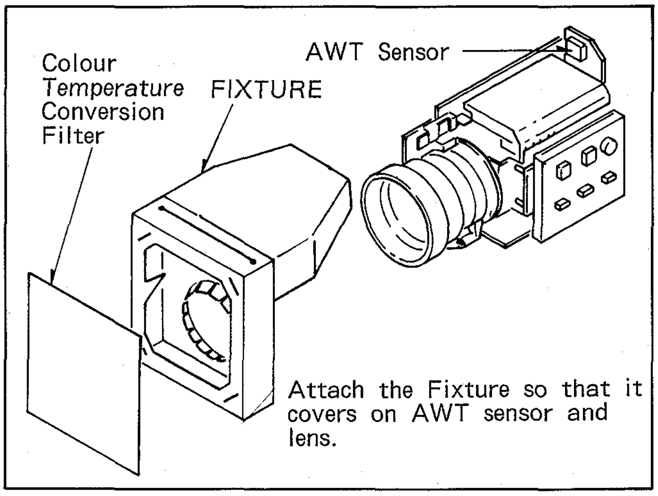

Colour Temperature Conversion Filter
FIXTURE
AWT Sensor
Attach the Fixture so that it covers on AWT sensor and lens.

Fig. C29

Note 2:
(1) Aim the camera at a sunny source (window, etc.)
(2) Incoming light must be from an outdoor source only, source and illumination on the sensor must be more than 500Lx, and colour temperature must be within 5000 degrees to 6000 degrees Kelvin. (Refer to Fig. C31)

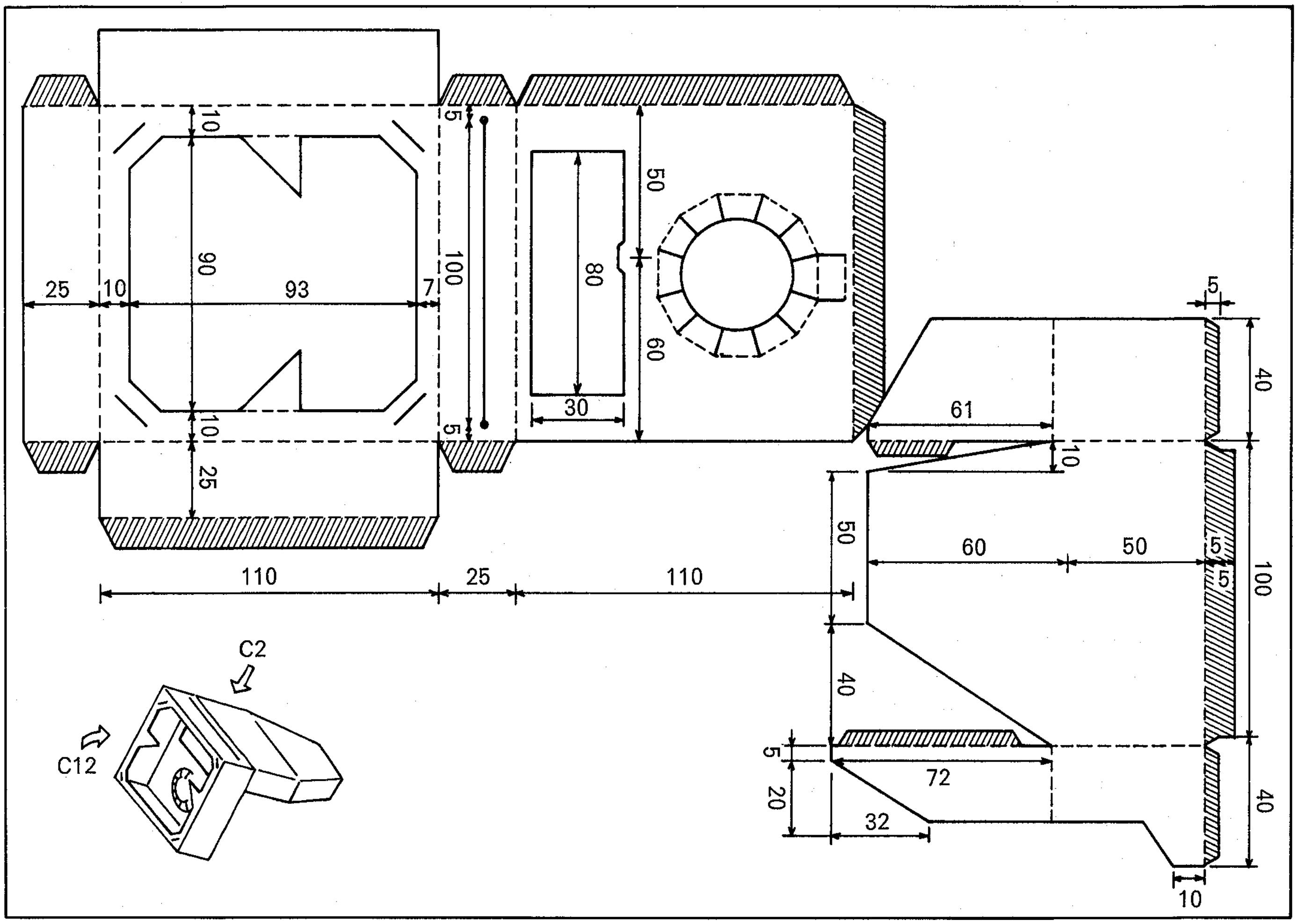

25
10
93
7
10
90
10
25
5
100
5
50
80
60
30
110
25
110
5
40
61
10
50
60
50
5
5
100
40
5
20
72
32
40
10
C2
C12

Fig. C30

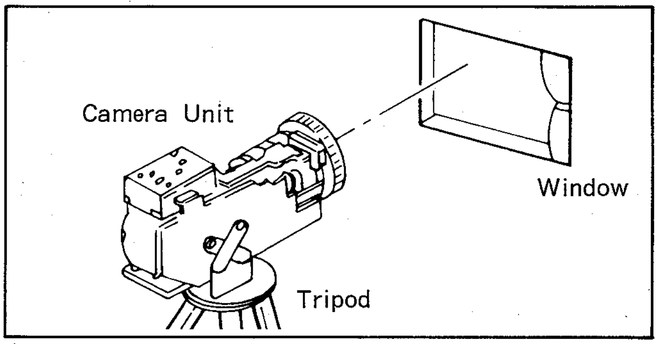

Camera Unit
Window
Tripod

Fig. C31

(1) White balance selector should be set for "INDOOR".
(2) Aim the camera to white chart.
(3) Confirm that any GND probe of oscilloscope is not connected to GND.
(4) Connect the GND probe to TP511.
And hot probe to TP512. Set the oscilloscope to DC range.
(5) Adjust the VR530 so that voltage become 0+–0.1V.
(6) Connect the GND probe to TP511 and hot probe to TP513.
(7) Adjust the VR531 so that voltage become 0+–0.1V.

18. AWB OFFSET ADJUSTMENT

TP	ADJ.	IRIS	CHART
TP511, TP512 TP513	VR530 VR531	☒	WHITE CHART
M.EQ.		**SPEC.**	
OSCILLOSCOPE		0+–0.1V	

WITH VECTOR SCOPE

TP	ADJ.	IRIS	CHART
VIDEO OUT	VR530 VR531	☒	WHITE CHART
M.EQ.		**SPEC.**	
VECTOR SCOPE		VECTORS CENTRE	

(1) Aim the camera at the white chart and focus the lens on the object.
(2) Connect the VECTOR SCOPE to the video output.
(3) Adjust the offset control (VR530, VR531) so that the vector comes to centre as shown below.

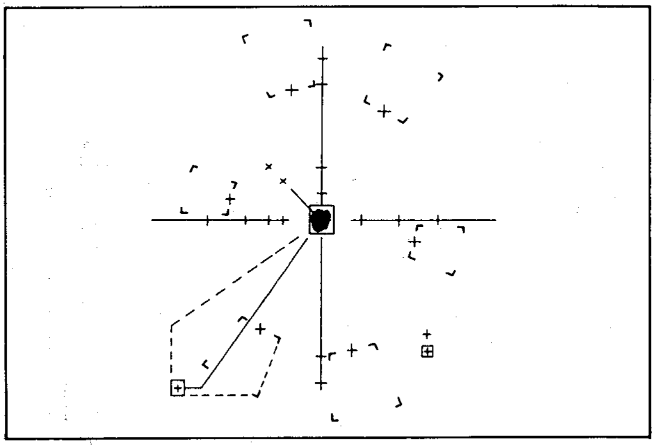


Fig. C32

19. COLOUR PHASE AND R-Y/B-Y GAIN ADJUSTMENT

TP	ADJ.	LENS CAP	CHART
VIDEO OUTPUT	VR310, VR307, VR314, VR313, VR328	NO	COLOUR CHIP CHART

M. EQ.	SPEC.
VECTORSCOPE	Fig. C27

Note:
VR310, VR307, VR314, VR313, VR328 : Process C.B.A.

(1) Aim the camera at a Colour Chip Chart.
(2) Connect the jumper wire among TP511, TP512 and TP513 on the Process C.B.A.
(3) Supply the video signal to the vectorscope.
(4) Adjust the Colour Phase Control (VR307 and VR314), the R−Y Gain Control (VR313) and the B−Y Gain Control (VR328) so that the vector of each colour is as shown in Fig. C33.

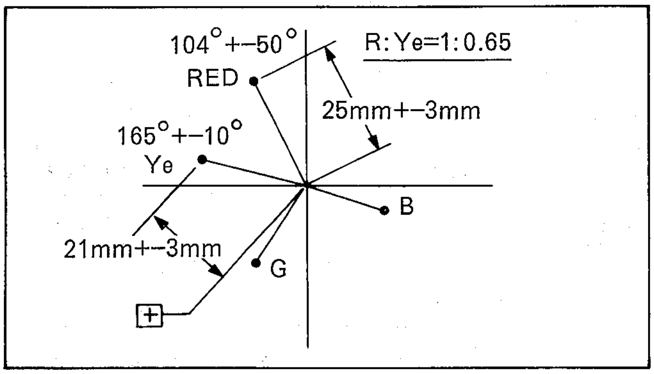


Fig. C33

20. HIGH INTENSITY SUPPRESS ADJUSTMENT

TP	ADJ.	LENS CAP	CHART
	VR635	NO	COLOUR CHART

M. EQ.	SPEC.
TV MONITOR	HALF SIZE (YELLOW) YELLOW COLOUR IS JUST BEFORE CUT OFF

Note:
VR309 : Process C.B.A.

(1) Aim the camera at the colour chart. (colour bar).
(2) Set the horizontal picture frame (H size) to 11usec, and memorize the level of yellow part.
(3) Set the horizontal picture frame to 16usec.
(4) In case that the level of yellow part is more than 50% compared with the yellow level of when horizontal picture frame is 40usec : Adjust the VR635 so that the level of yellow becomes 50% as shown in Fig. C34.
(5) In case that the level of yellow part is already less than 50% of when the horizontal picture frame is 40usec : Adjust the VR309 until just before yellow part begins to disappear.

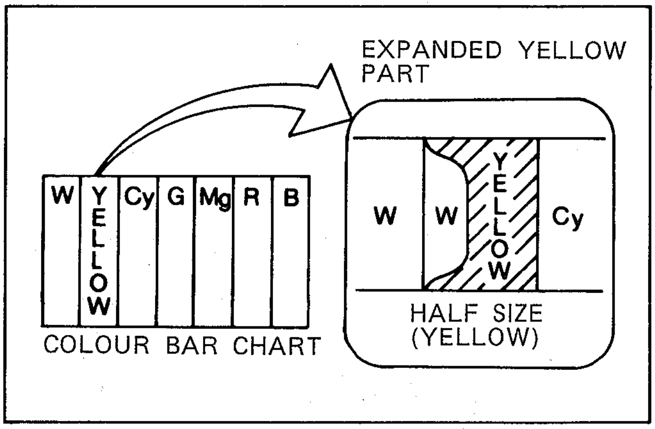


Fig. C34

21. AWT MODE (OFFSET) ADJUSTMENT

TP	ADJ.	LENS CAP	CHART
VIDEO OUTPUT	VR525 VR526	NO	WHITE CHART

M. EQ.	SPEC.
VECTORSCOPE	CENTER OF VECTORSCOPE
OSCILLOSCOPE	WAVEFORM IS MINIMIZED

Note:
VR525, VR526 : Process C.B.A.

WITH VECTORSCOPE

(1) Set the White balance selector for "AUTO" position.
(2) Aim the camera at the white chart.
(3) Supply the video signal to the vectorscope.
(4) Connect the jumper wire among TP511, TP512 and TP513 to cut the R−Y, B−Y feed back line.
(5) Set the diffusion plate on to surface of AWT sensor and taping around sensor with black tape so that any light is not entered to sensor from the gap between sensor and diffusion plate.
(6) Adjust the VR525 and VR526 so that the colour vectors move to centre of screen on vector scope. (Refer to Fig. C35).

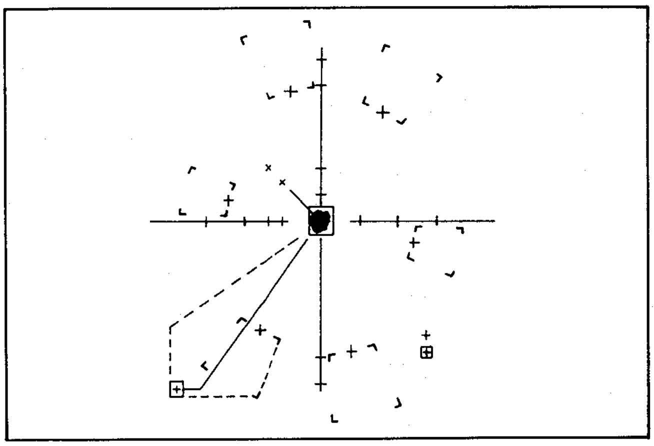


Fig. C35

WITH OSCILLOSCOPE

(1) Adjustment condition and procedure are same as using vectorscope.
(2) Adjust VR525 and VR526 so that the waveform is minimized.

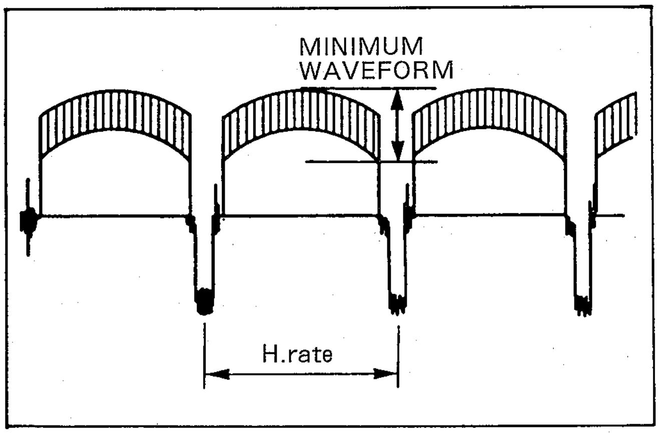


Fig. C36

22. AWT MODE (GAIN) ADJUSTMENT

TP	ADJ.	LENS CAP	CHART
VIDEO OUTPUT	VR523, VR527	NO	WHITE CHART

M. EQ.	SPEC.
VECTORSCOPE	CENTER OF VECTORSCOPE
OSCILLOSCOPE	WAVEFORM IS MINIMIZED

Note:
VR523, VR527 : Process C.B.A.

WITH VECTORSCOPE

(1) Set the White balance selector for "AUTO" position.
(2) Aim the camera at the white chart, Lighting should be a 3200 degrees K Halogen lamp.
(3) Supply the video signal to the vectorscope.
(4) Connect the jumper wire among TP511, TP512 and TP513.
(5) Attach the diffusion plate (VKW1049) onto surface of AWT sensor and taping around the sensor with black tape so that any light is not entered to sensor from the gap between sensor and diffusion plate.
(6) Set the fixture (refer to Note 1 of item 15, outdoor white balance Adjustment) to the lens.
(7) Set the colour temperature conversion filter to the fixture as shown in Fig. C37. (VFK0375X3pieces to front of lens)

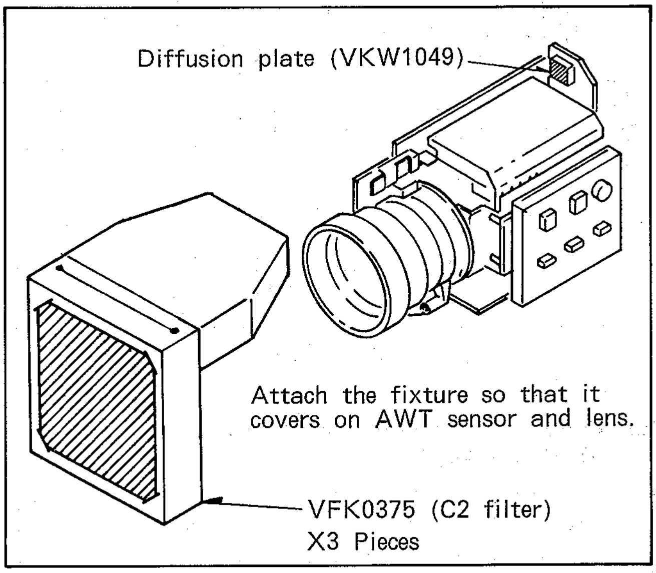

Diffusion plate (VKW1049)
Attach the fixture so that it covers on AWT sensor and lens.
VFK0375 (C2 filter)
X3 Pieces

Fig. C37

(8) Adjust the VR523 and VR527 so that colour vectors collect at centre.
(9) Next, remove the colour temperature conversion filter with fixture from the lens. If the colour vectors do not collect at centre, adjust the AWT offset adjustment controls (VR525, VR526) so that colour vectors come to centre.
(10) Repeat steps (6)–(9).

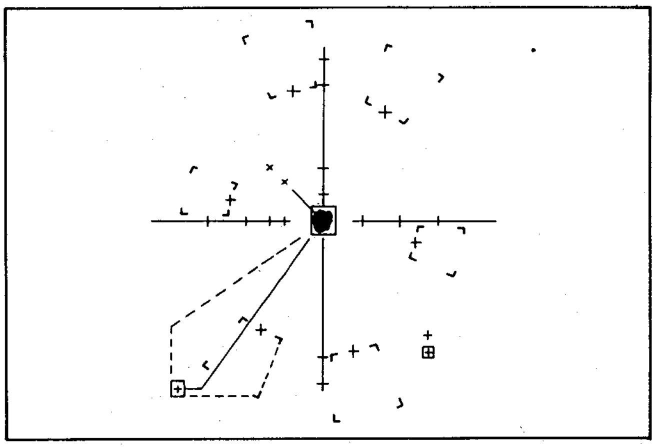


Fig. C38

WITH OSCILLOSCOPE

(1) Adjustment condition and procedure are same as using vectorscope.
(2) Adjust VR523, VR527, VR525 and VR526 that the waveform is minimized.

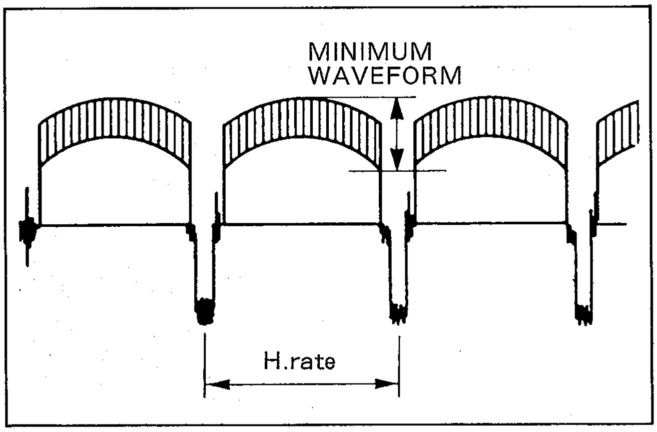


Fig. C39

23. LOW LIGHT CHROMA SUPPRESS ADJUSTMENT

TP	ADJ.	CHART
TP638	VR636	
M. EQ.	**SPEC.**	
D.V.M.	2.60+–0.05V	

Note:
VR636 : Process C.B.A.

(1) Cover the Lens Cap on camera lens.
(2) Connect the D.V.M. at TP638.
(3) Adjust the VR636 so that DC voltage become 2.6+–0.05V.

AUTO FOCUS SECTION

PREPARATION

The following adjustments are for the Auto Focus Unit.

(1) Camera zoom is positioned at the end of TELE side.

24. AF GAIN ADJUSTMENT

TP	ADJ.	IRIS CAP	CHART
TP702 TP703	C703	NO	
M. EQ.	**SPEC.**		
OSCILLOSCOPE	T=9.6+–4u–sec.		

Note:
TP702, TP703, C703 : AF C.B.A.

(1) Set the AF Gate Control (C703) as shown in Fig. C40.

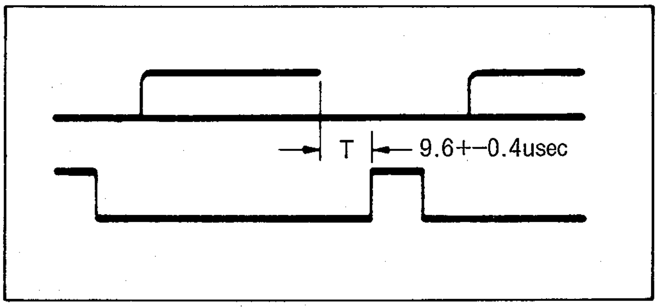


Fig. C40

25. BIMOLF GAIN CONTROL ADJUSTMENT

TP	ADJ.	LENS CAP	CHART
TP704	VR703	YES	
M. EQ.	**SPEC.**		
OSCILLOSCOPE	A=11V+–0.5Vp–p		

Note:
TP704, VR703 : AF C.B.A.

(1) Set the Focus Switch to the MANUAL position.
(2) Cover the camera lens with the lens cap.
(3) Connect the scope to the TP704.
(4) Adjust the Bimolf Gain Control (VR703) so that the signal level (A) is 11V+–0.5Vp–p.

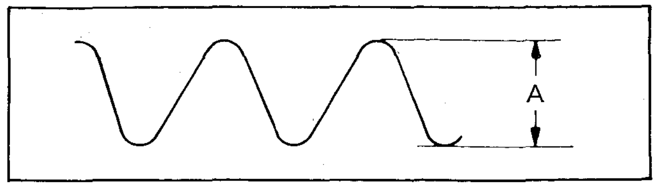


Fig. C41

26. AF AMP BIAS GAIN ADJUSTMENT

TP	ADJ.	LENS CAP	CHART
TP518, TP516, TP521, TP520	VR701 VR702	NO	GRAY SCALE CHART
M. EQ.		**SPEC.**	
D.V.M.		----------	

Note:
TP516, TP518, TP520, TP521 : Process C.B.A.
VR701, VR702 : AF C.B.A.

(1) Connect a jumper wire between TP516 and TP521 to close Iris.
(2) Adjust the HALL AMP Control (VR701) so that the voltage level at TP518 is 1.74V+-0.02V.
(3) Disconnect the jumper wire between TP516 and TP521.
(4) Next, connect a jumper wire between TP516 and TP520 to open the Iris.
(5) Adjust the HALL AMP Control (VR702) so that the voltage Level of TP518 is 3.72V+-0.05V.
(6) Disconnect the jumper wire between TP516 and TP520.
(7) Next, confirm the voltage level at TP518 by connecting a jumper wire between TP516 and TP521.
(8) If the voltage level at TP518 is not 1.74V+-0.02V repeat steps (1)-(6).

27. AF VH FREQUENCY ADJUSTMENT

TP	ADJ.	IRIS CAP	CHART
TP705	C737	NO	WHITE/GRAY CHART
M. EQ.		**SPEC.**	
OSCILLOSCOPE		A=2.80V+-0.05V DC-RANGE	

Note:
TP705, TP710 : AF C.B.A.
TP516, TP520 : Process C.B.A.
ZOOM : TELE SIDE
Focus : AUTO

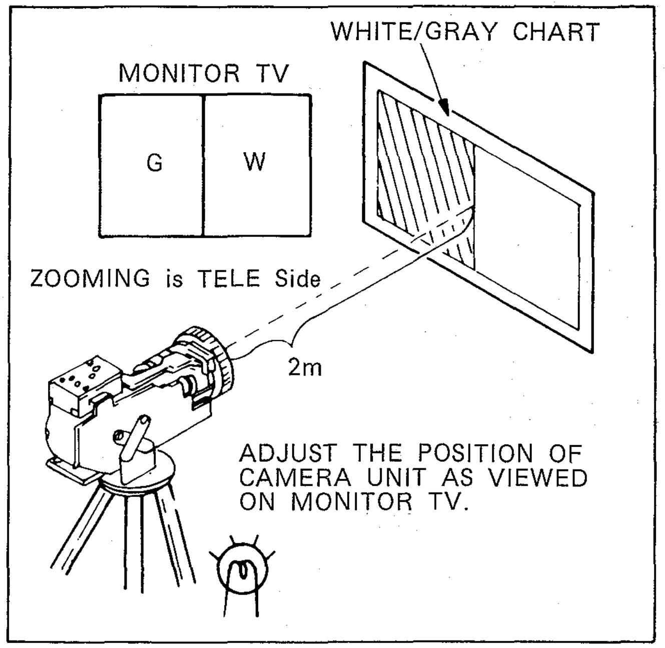


Fig. C42

(1) Connect a jumper between TP516 and TP520 to
(1) Connect a jumper between TP516 and TP520 to open the Iris.
(2) Aim the camera at the white/gray chart that was attached to previous service manual of Movie Camera.
(3) Set the lighting condition so that voltage at TP710 becomes 180mV+-10mVp-p as shown below.

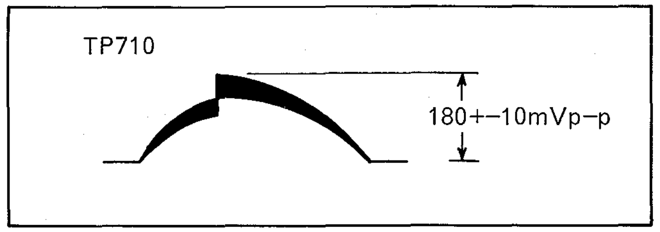


Fig. C43

(4) Adjust the VH frequency level control (C737) so that DC level at TP705 becomes 2.8V+-0.05V as shown below.

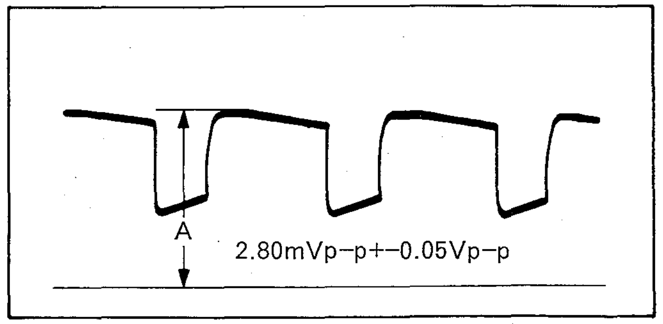


Fig. C44

2-4-2. ELECTRICAL ADJUSTMENT FOR E.V.F. SECTION

PREPARATION

The following adjustments are for Electronic Viewfinder.

(1) Connect the Viewfinder plug to the E.V.F. connector on the unit.
(2) The camera circuit must be completely aligned before viewfinder adjustments are made.

1. H-OSC ADJUSTMENT

TP	ADJ.	LENS CAP	CHART
Pin 1 of P801	VR802	NO	BALL CHART
M. EQ.		**SPEC.**	
FREQUENCY COUNTER		15.9KHz+-0.1KHz	

Note:
P801, VR802 : E.V.F. C.B.A.

(1) Connect the frequency counter to Pin1 of P801.
(2) Adjust the H-OSC (VR802) so that the frequency is 15.9+-0.1KHz.

2. CENTERING ADJUSTMENT

(1) Aim the camera at the registration chart.
(2) Adjust the Deflection Yoke Centering Magnets by turning them so that the picture on monitor TV is centered.

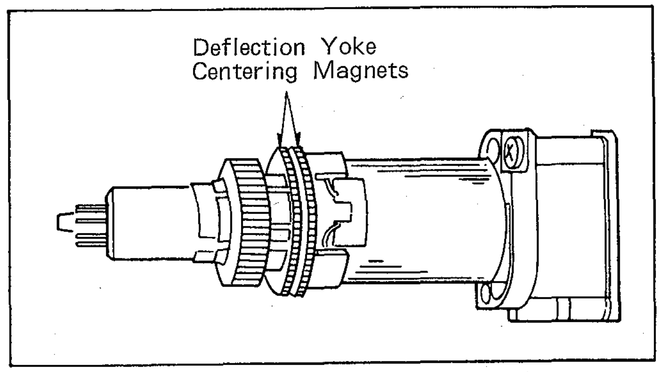


Fig. C45

3. FOCUS ADJUSTMENT

TP	ADJ.	LENS CAP	CHART
	VR803	NO	BALL CHART
M. EQ.		**SPEC.**	
VIEWFINDER		BEST RESOLUTION	

Note:
VR803 : E.V.F. C.B.A.

(1) Aim the camera at the Ball chart.
(2) Adjust the focus control (VR803) for best resolution in the viewfinder.

4. V. SIZE ADJUSTMENT

TP	ADJ.	LENS CAP	CHART
	VR801	NO	GRAY SCALE CHART
M. EQ.		**SPEC.**	
VIEWFINDER		VERTICAL SIZE IS FIXED.	

Note:
VR801 : E.V.F. C.B.A.

(1) Aim the camera at the gray scale chart.
(2) Adjust the Vertical Size (VR801) so the Vertical Size is correct and the picture does not roll as shown in Fig. C46.

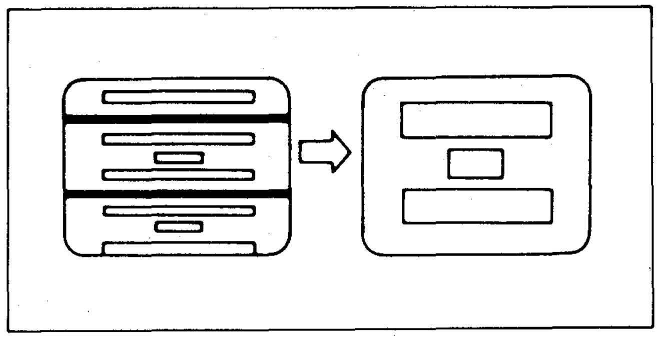


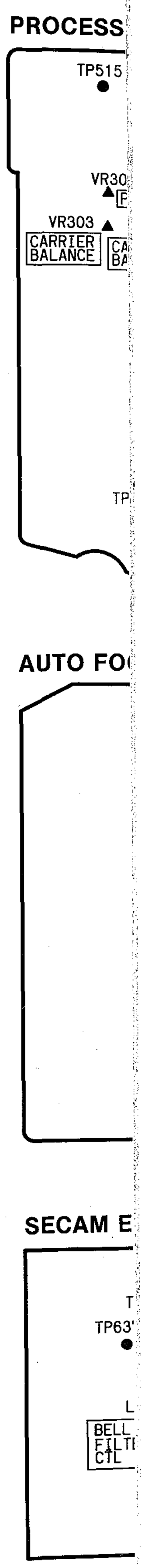
Fig. C46

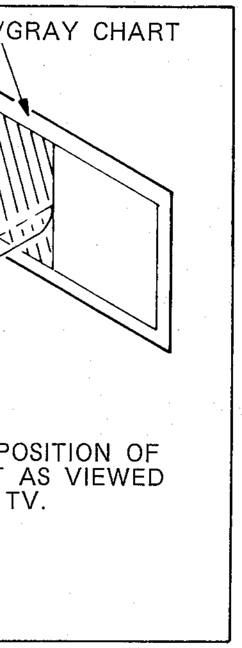
5. BRIGHTNESS ADJUSTMENT

TP	ADJ.	LENS CAP	CHART
	VR804	NO	GRAY SCALE CHART
M. EQ.		**SPEC.**	
VIEWFINDER		NATURAL GRADATION	

Note:
VR804 : E.V.F. C.B.A.

(1) Aim the camera at gray scale chart.
(2) Adjust the brightness control (VR804) so that the black and white bars in the EVF screen are the same as they are in the monitor TV screen.

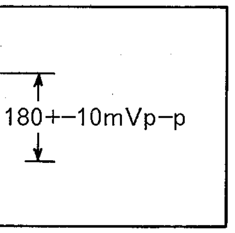



/GRAY CHART
POSITION OF
AS VIEWED
TV.

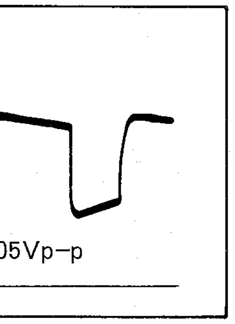
P516 and TP520 to
P516 and TP520 to

te/gray chart that
service manual of

o that voltage at
Vp-p as shown below.



vel control (C737)
comes 2.8V+-0.05V



2-4-2. ELECTRICAL ADJUSTMENT FOR E.V.F. SECTION

PREPARATION

The following adjustments are for Electronic Viewfinder.

(1) Connect the Viewfinder plug to the E.V.F. connector on the unit.
(2) The camera circuit must be completely aligned before viewfinder adjustments are made.

1. H-OSC ADJUSTMENT

TP	ADJ.	LENS CAP	CHART
Pin 1 of P801	VR802	NO	BALL CHART
M. EQ.	**SPEC.**		
FREQUENCY COUNTER	15.9KHz+-0.1KHz		

Note:
P801, VR802 : E.V.F. C.B.A.

(1) Connect the frequency counter to Pin1 of P801.
(2) Adjust the H-OSC (VR802) so that the frequency is 15.9+-0.1KHz.

2. CENTERING ADJUSTMENT

(1) Aim the camera at the registration chart.
(2) Adjust the Deflection Yoke Centering Magnets by turning them so that the picture on monitor TV is centered.

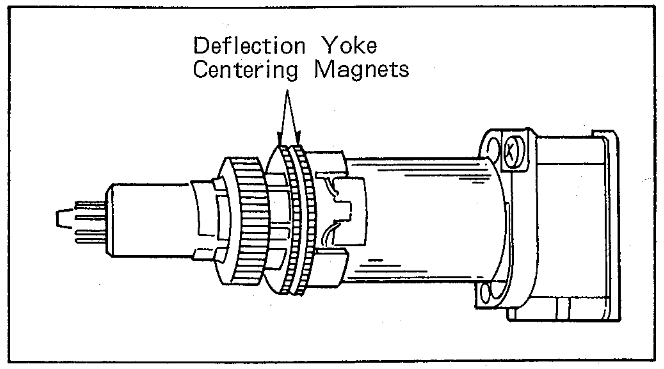

Deflection Yoke
Centering Magnets

Fig. C45

3. FOCUS ADJUSTMENT

TP	ADJ.	LENS CAP	CHART
	VR803	NO	BALL CHART
M. EQ.	**SPEC.**		
VIEWFINDER	BEST RESOLUTION		

Note:
VR803 : E.V.F. C.B.A.

(1) Aim the camera at the Ball chart.
(2) Adjust the focus control (VR803) for best resolution in the viewfinder.

4. V. SIZE ADJUSTMENT

TP	ADJ.	LENS CAP	CHART
	VR801	NO	GRAY SCALE CHART
M. EQ.	**SPEC.**		
VIEWFINDER	VERTICAL SIZE IS FIXED.		

Note:
VR801 : E.V.F. C.B.A.

(1) Aim the camera at the gray scale chart.
(2) Adjust the Vertical Size (VR801) so the Vertical Size is correct and the picture does not roll as shown in Fig. C46.

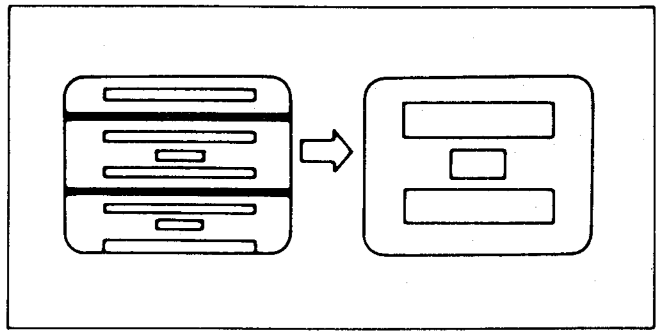


Fig. C46

5. BRIGHTNESS ADJUSTMENT

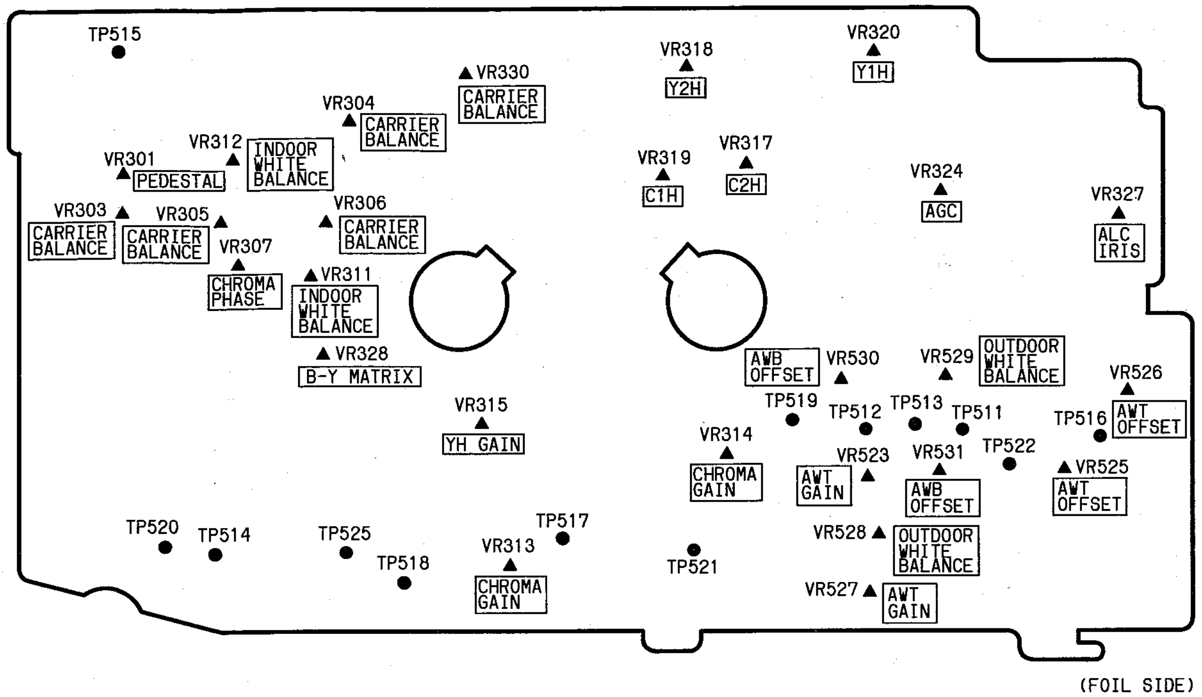
TP	ADJ.	LENS CAP	CHART
	VR804	NO	GRAY SCALE CHART
M. EQ.	**SPEC.**		
VIEWFINDER	NATURAL GRADATION		

Note:
VR80 4 : E.V.F. C.B.A.

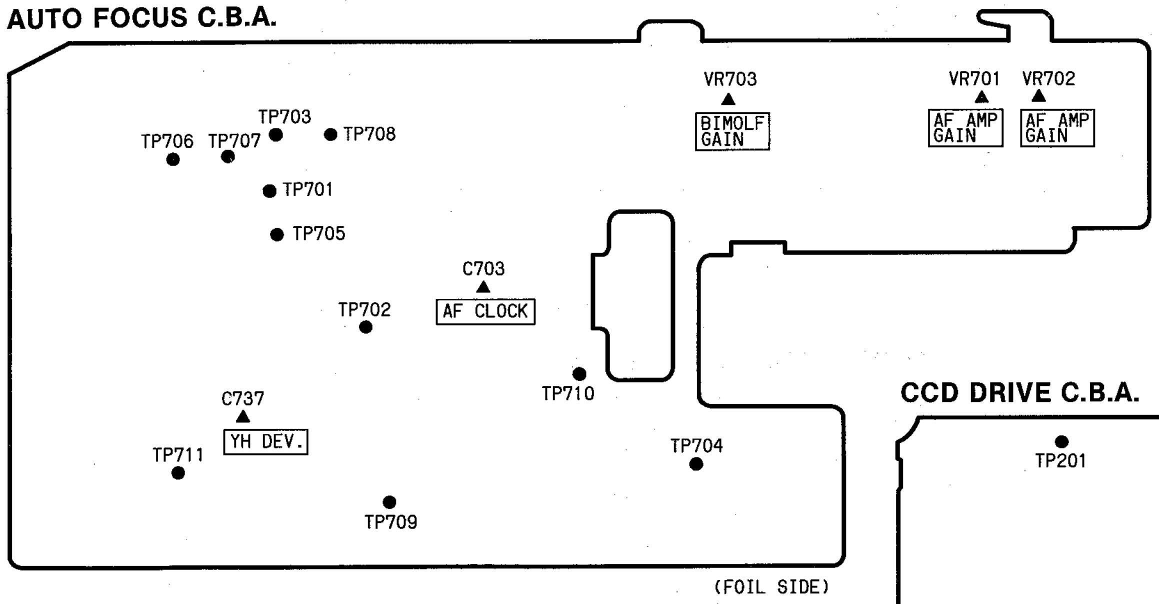
(1) Aim the camera at gray scale chart.
(2) Adjust the brightness control (VR804) so that the black and white bars in the EVF screen are the same as they are in the monitor TV screen.

LOCATION OF TEST POINTS & CONTROLS (1)

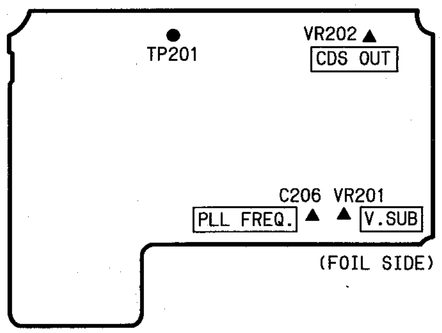
PROCESS C.B.A.


TP515
VR330
CARRIER BALANCE
VR304
CARRIER BALANCE
VR312
INDOOR WHITE BALANCE
VR301
PEDESTAL
VR303
CARRIER BALANCE
VR305
CARRIER BALANCE
VR306
CARRIER BALANCE
VR307
CHROMA PHASE
VR311
INDOOR WHITE BALANCE
VR328
B-Y MATRIX
VR315
YH GAIN
VR318
Y2H
VR320
Y1H
VR319
C1H
VR317
C2H
VR324
AGC
VR327
ALC IRIS
AWB OFFSET
VR530
VR529
OUTDOOR WHITE BALANCE
VR526
TP519
TP512
TP513
TP511
TP516
AWT OFFSET
VR314
CHROMA GAIN
VR523
AWT GAIN
VR531
AWB OFFSET
TP522
VR525
AWT OFFSET
VR528
OUTDOOR WHITE BALANCE
VR527
AWT GAIN
TP520
TP514
TP525
TP518
VR313
CHROMA GAIN
TP517
TP521
(FOIL SIDE)

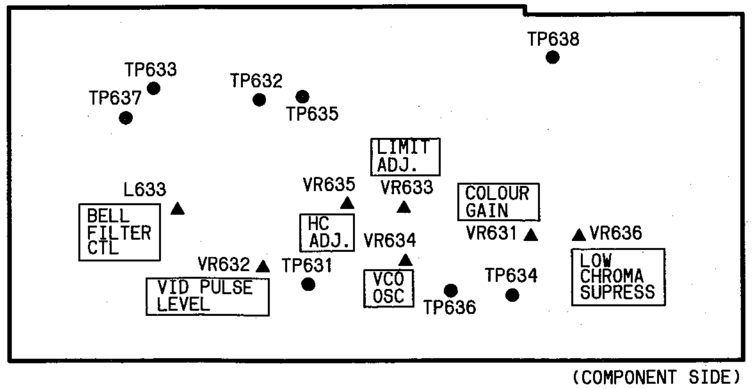
AUTO FOCUS C.B.A.


TP703
TP706
TP707
TP708
TP701
TP705
VR703
BIMOLF GAIN
VR701
VR702
AF AMP GAIN
AF AMP GAIN
C703
AF CLOCK
TP702
TP710
C737
YH DEV.
TP711
TP704
TP709
(FOIL SIDE)

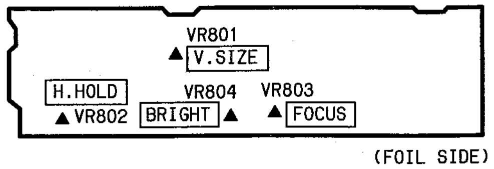
CCD DRIVE C.B.A.


TP201
VR202
CDS OUT
C206
VR201
PLL FREQ.
V.SUB
(FOIL SIDE)

SECAM ENCODER C.B.A.

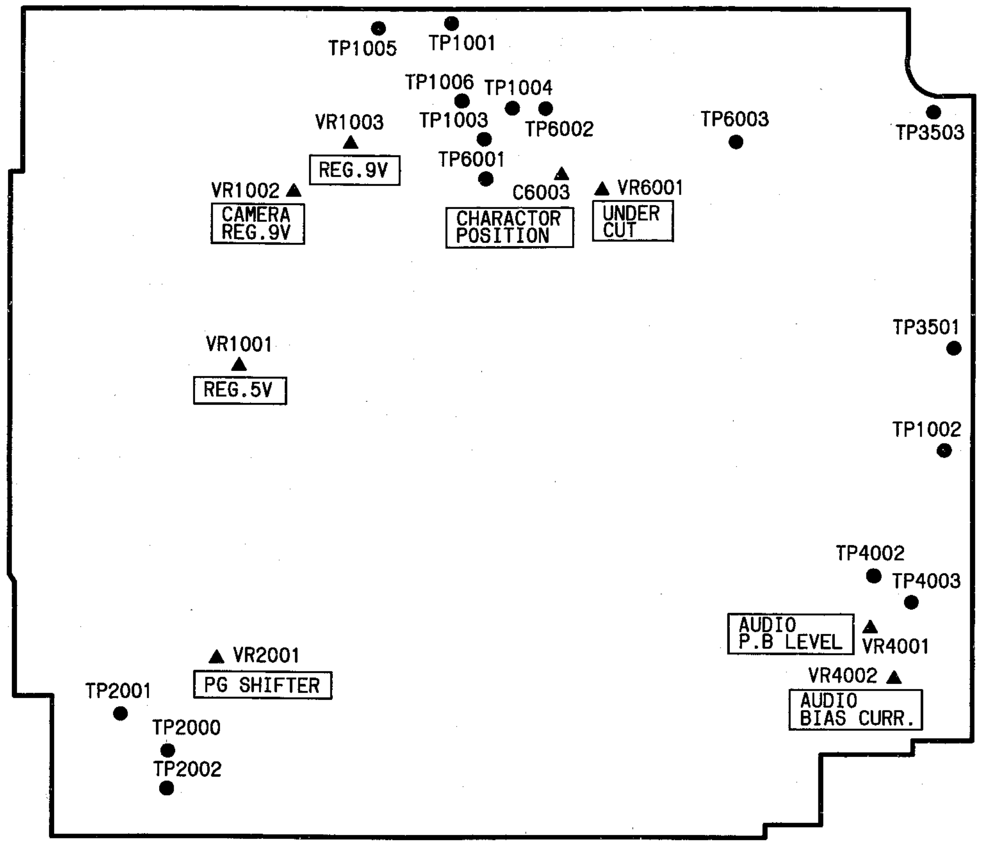

TP638
TP633
TP637
TP632
TP635
LIMIT ADJ.
L633
BELL FILTER CTL
VR635
VR633
HC ADJ.
COLOUR GAIN
VR634
VR631
VR636
VR632
TP631
VID PULSE LEVEL
VCO OSC
TP636
TP634
LOW CHROMA SUPRESS
(COMPONENT SIDE)

E.V.F. C.B.A.


VR801
V.SIZE
H.HOLD
VR804
VR803
VR802
BRIGHT
FOCUS
(FOIL SIDE)

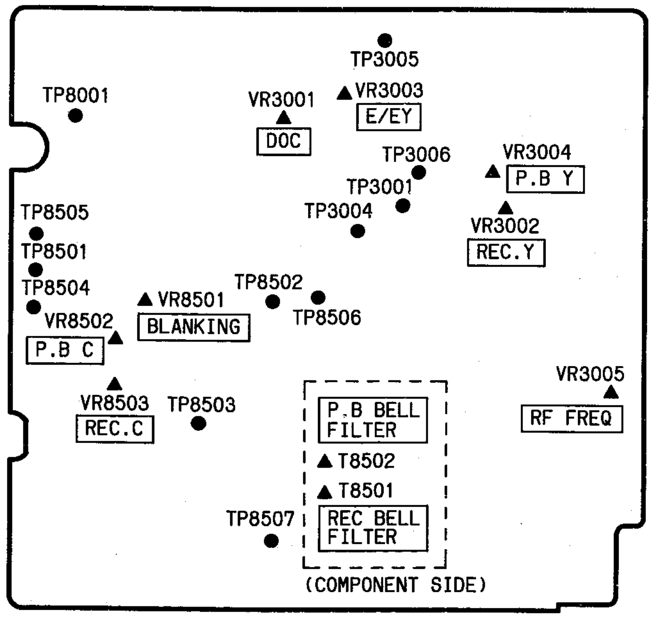
LOCATION OF TEST POINTS & CONTROLS (2)

MAIN C.B.A.


TP1005
TP1001
TP1006
TP1004
VR1003
TP1003
TP6002
TP6003
TP3503
REG.9V
TP6001
VR1002
C6003
VR6001
CAMERA REG.9V
CHARACTOR POSITION
UNDER CUT
TP3501
VR1001
REG.5V
TP1002
TP4002
TP4003
AUDIO P.B LEVEL
VR4001
VR2001
VR4002
TP2001
PG SHIFTER
AUDIO BIAS CURR.
TP2000
TP2002

(FOIL SIDE)

LUMINANCE & CHROMINANCE C.B.A.


TP3005
TP8001
VR3001
VR3003
E/EY
DOC
TP3006
VR3004
TP3001
P.B Y
TP8505
TP3004
VR3002
TP8501
REC.Y
TP8504
VR8501
TP8502
VR8502
BLANKING
TP8506
P.B C
VR3005
VR8503
TP8503
P.B BELL FILTER
RF FREQ
REC.C
T8502
T8501
TP8507
REC BELL FILTER
(COMPONENT SIDE)

(FOIL SIDE)

2-4-3. ELECTRICAL ADJUSTMENT FOR VTR SECTION

TEST EQUIPMENT AND TOOLS

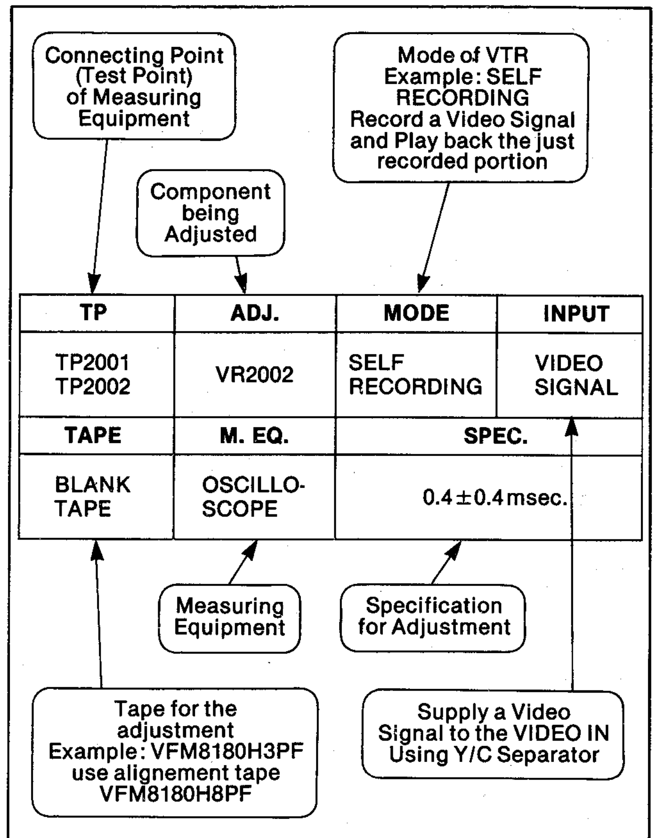
The following equipments are required for adjustment of the VHS-C Movie NV-MC20.

1. VTVM (Vacuum Tube Volt Meter)
   DVM (Digital Volt Meter)
   Voltage Range : 0.01~50V
2. Dual Trace Oscilloscope
   Voltage Range : 0.06~50V/div
   Frequency Range : 0~50MHz
   Probe : 10:1 or 1:1
3. Frequency counter
   Frequency Range : 0~10MHz
4. Signal Generator (Sinewave)
   Frequency Range : 0~10MHz
5. Video Sweep Generator
   Frequency Range : 0~10MHz
6. Colour Monitor TV
7. Plastic Tip Driver
8. VHS-C Alignment Tape (VFM8180H8PF)
9. VHS-C Blank Tape
10. Pattern Generator

PREPARATION

1. Remove the casing panels.
   (Refer to the disassemble method)
2. Connect the Y/C separator (VFK0304) to the extension cable (VFK0430) with Y/C separator connection cable (VFKS0074) and connect this extension cable (VFK0430) to connector P1002 on Main C.B.A.
3. Supply the video signal to the video circuit by using the Y/C separator (VFK0304) as shown in Fig. E1.
4. Supply the audio signal to audio circuit through the External Microphone Socket.

HOW TO READ THE ADJUSTMENT PROCEDURES


Connecting Point (Test Point) of Measuring Equipment
Mode of VTR Example: SELF RECORDING Record a Video Signal and Play back the just recorded portion
Component being Adjusted
Measuring Equipment
Specification for Adjustment
Tape for the adjustment Example: VFM8180H3PF use alignement tape VFM8180H8PF
Supply a Video Signal to the VIDEO IN Using Y/C Separator

TP	ADJ.	MODE	INPUT
TP2001 TP2002	VR2002	SELF RECORDING	VIDEO SIGNAL
TAPE	**M. EQ.**	**SPEC.**	
BLANK TAPE	OSCILLO-SCOPE	0.4±0.4msec.	

Note: If ☒ appears in any block, this means it is not used or not important.

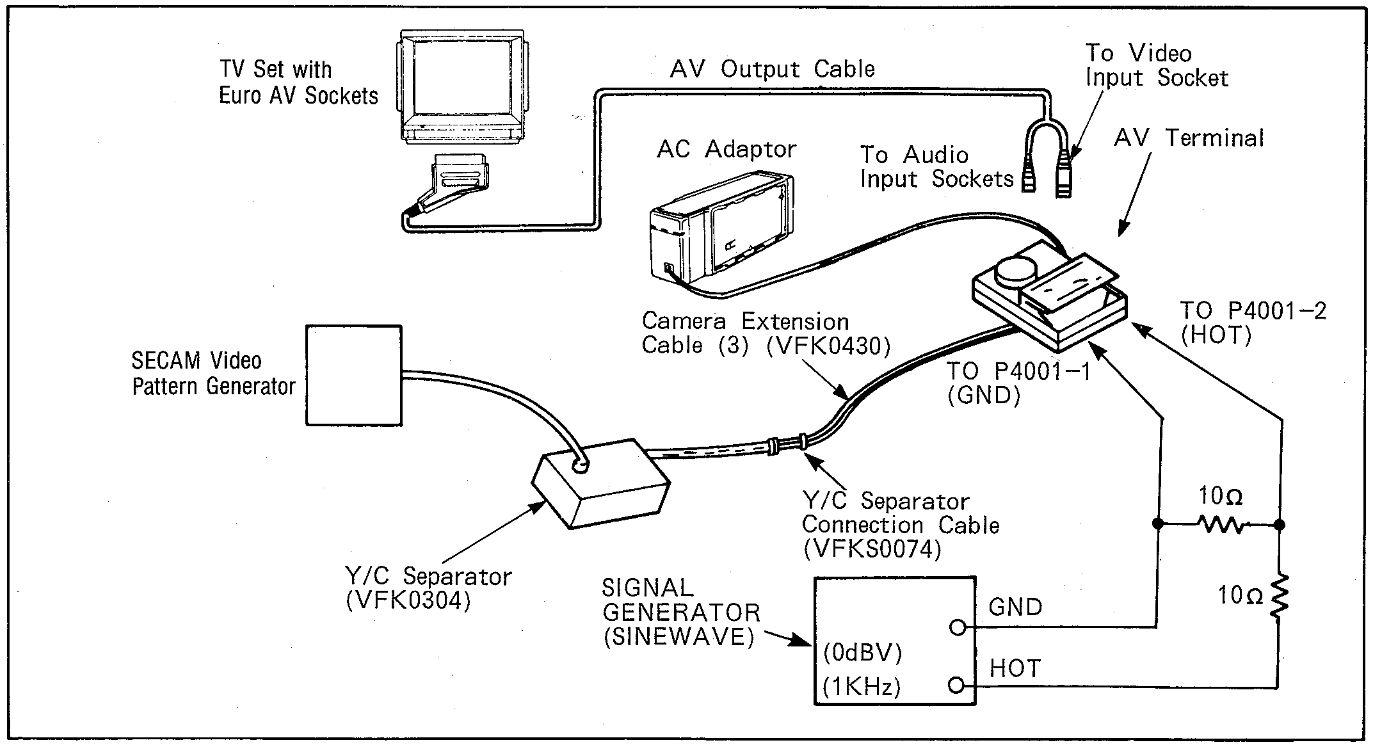

TV Set with Euro AV Sockets
AV Output Cable
To Video Input Socket
AC Adaptor
To Audio Input Sockets
AV Terminal
Camera Extension Cable (3) (VFK0430)
TO P4001-2 (HOT)
SECAM Video Pattern Generator
TO P4001-1 (GND)
Y/C Separator Connection Cable (VFKS0074)
10Ω
Y/C Separator (VFK0304)
SIGNAL GENERATOR (SINEWAVE)
GND
10Ω
(0dBV)
(1KHz)
HOT

Fig.E1

POWER SECTION

1. REG. 5V ADJU

TP	A
TP1001	VR
TAPE	**M.**
BLANK TAPE	D.V

Camera unit shoul during Power REG. Camera REG 9V)

2. REG. 9V ADJU

TP	A
TP1002	VR
TAPE	**M.**
BLANK TAPE	D.V

3. CAMERA REG.

TP	A
TP1003	VR
TAPE	**M.**
BLANK TAPE	D.V

This adjustment sh REG. 5V ADJUSTM

4. UNDER CUT AD

TP	A
TP6001	VR6
TAPE	**M.**
BLANK TAPE	OSCI SCOP DC PO SUPP D.V.M

Note:
Do not connect
Supply to pin
then supply the

2-4-3. ELECTRICAL ADJUSTMENT FOR VTR SECTION

TEST EQUIPMENT AND TOOLS

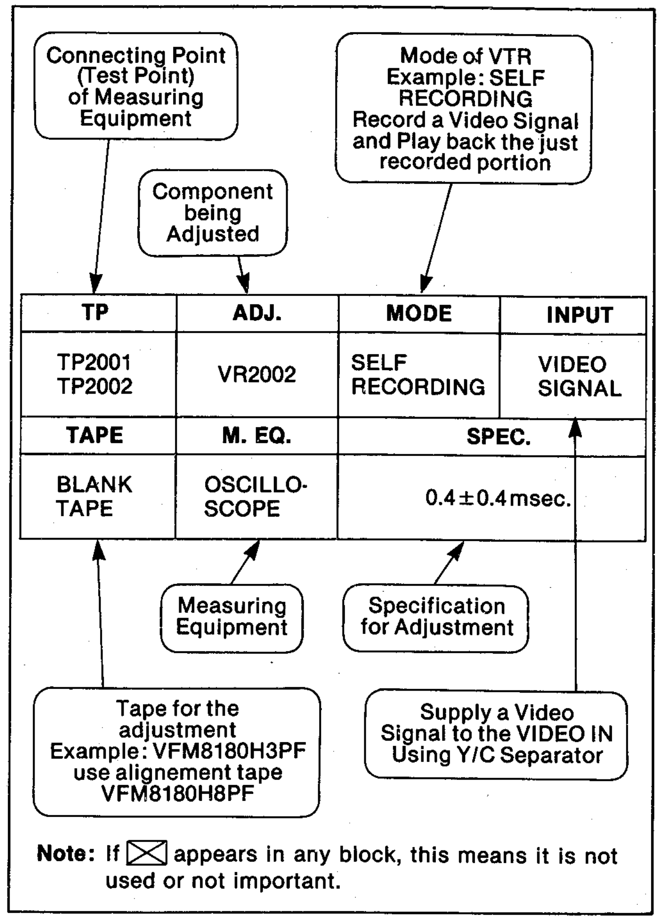
The following equipments are required for adjustment of the VHS–C Movie NV–MC20.

1. VTVM (Vacuum Tube Volt Meter)
   DVM (Digital Volt Meter)
   Voltage Range : 0.01~50V
2. Dual Trace Oscilloscope
   Voltage Range : 0.06~50V/div
   Frequency Range : 0~50MHz
   Probe : 10:1 or 1:1
3. Frequency counter
   Frequency Range : 0~10MHz
4. Signal Generator (Sinewave)
   Frequency Range : 0~10MHz
5. Video Sweep Generator
   Frequency Range : 0~10MHz
6. Colour Monitor TV
7. Plastic Tip Driver
8. VHS–C Alignment Tape (VFM8180H8PF)
9. VHS–C Blank Tape
10. Pattern Generator

PREPARATION

1. Remove the casing panels.
   (Refer to the disassemble method)
2. Connect the Y/C separator (VFK0304) to the extension cable (VFK0430) with Y/C separator connection cable (VFKS0074) and connect this extension cable (VFK0430) to connector P1002 on Main C.B.A.
3. Supply the video signal to the video circuit by using the Y/C separator (VFK0304) as shown in Fig. E1.
4. Supply the audio signal to audio circuit through the External Microphone Socket.

HOW TO READ THE ADJUSTMENT PROCEDURES


Connecting Point (Test Point) of Measuring Equipment
Mode of VTR Example: SELF RECORDING Record a Video Signal and Play back the just recorded portion
Component being Adjusted
Measuring Equipment
Specification for Adjustment
Tape for the adjustment Example: VFM8180H3PF use alignement tape VFM8180H8PF
Supply a Video Signal to the VIDEO IN Using Y/C Separator

TP	ADJ.	MODE	INPUT
TP2001 TP2002	VR2002	SELF RECORDING	VIDEO SIGNAL
TAPE	**M. EQ.**	**SPEC.**	
BLANK TAPE	OSCILLO-SCOPE	0.4±0.4msec.	

Note: If ☒ appears in any block, this means it is not used or not important.

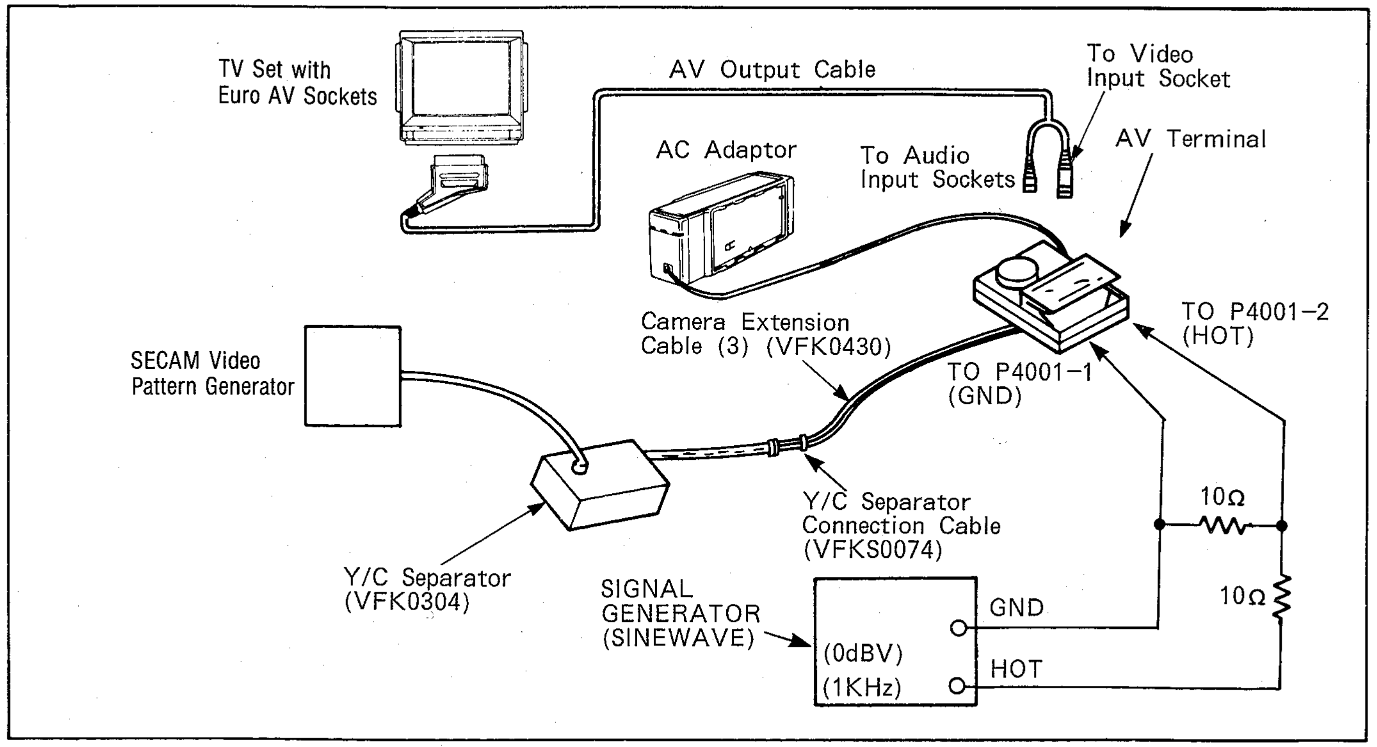

TV Set with Euro AV Sockets
AV Output Cable
To Video Input Socket
AC Adaptor
To Audio Input Sockets
AV Terminal
SECAM Video Pattern Generator
Camera Extension Cable (3) (VFK0430)
TO P4001–1 (GND)
TO P4001–2 (HOT)
Y/C Separator (VFK0304)
Y/C Separator Connection Cable (VFKS0074)
SIGNAL GENERATOR (SINEWAVE)
(0dBV)
(1KHz)
GND
HOT
10Ω
10Ω

Fig.E1

POWER SECTION

1. REG. 5V ADJUSTMENT

TP	ADJ.	MODE	INPUT
TP1001	VR1001	REC/PLAY	☒
TAPE	**M. EQ.**	**SPEC.**	
BLANK TAPE	D.V.M.	4.91±0.025V	

Camera unit should be connected to Main C.B.A. during Power REG. Adjustment. (REG. 5V, REG 9V, Camera REG 9V)

2. REG. 9V ADJUSTMENT

TP	ADJ.	MODE	INPUT
TP1002	VR1002	CAMERA RECORDING	☒
TAPE	**M. EQ.**	**SPEC.**	
BLANK TAPE	D.V.M.	8.2+0.1V 8.2−0.05V	

3. CAMERA REG. 9V ADJUSTMENT

TP	ADJ.	MODE	INPUT
TP1003	VR1003	REC/PLAY	☒
TAPE	**M. EQ.**	**SPEC.**	
BLANK TAPE	D.V.M.	$8.6^{+0.07V}_{-0.03V}$	

This adjustment should be always completed after REG. 5V ADJUSTMENT and REG. 9V ADJUSTMENT.

4. UNDER CUT ADJUSTMENT

TP	ADJ.	MODE	INPUT
TP6001	VR6001	REC/PLAY	☒
TAPE	**M. EQ.**	**SPEC.**	
BLANK TAPE	OSCILLO-SCOPE/ DC POWER SUPPLY/ D.V.M.	☒	

Note:
Do not connect AC Adaptor, connect a DC Power Supply to pin 2 (+) and pin 1 (−) of P1001, then supply the voltage 8.64+−0.05V.

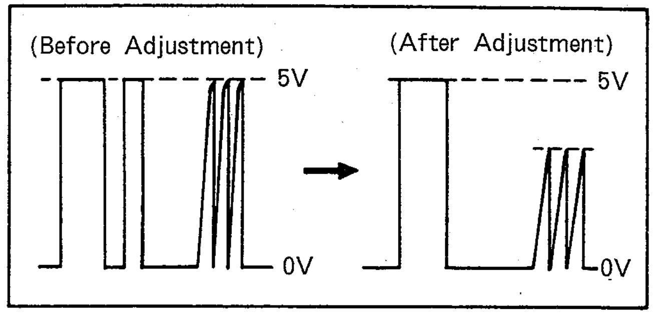


Fig. E2

SERVO SECTION

5. PG SHIFTER ADJUSTMENT

TP	ADJ.	MODE	INPUT
TP2001 VIDEO OUT	VR2001	PLAY	☒
TAPE	**M. EQ.**	**SPEC.**	
ALIGNMENT TAPE (VFM8180H8PF)	OSCILLO-SCOPE	6.5H±0.5H	

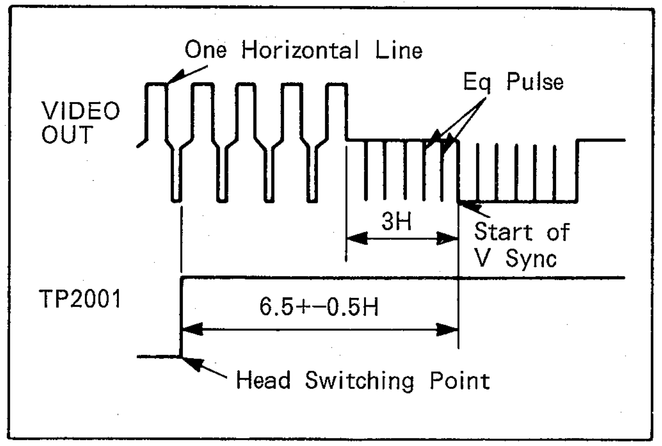


Fig. E3

LUMINANCE & CHROMINANCE SECTION

6. E-E LEVEL ADJUSTMENT

TP	ADJ.	MODE	INPUT
VIDEO OUT	VR3003	STOP	COLOUR BAR
TAPE	**M. EQ.**	**SPEC.**	
☒	OSCILLO-SCOPE	A=1.0±0.05Vp-p (75Ω Terminated)	

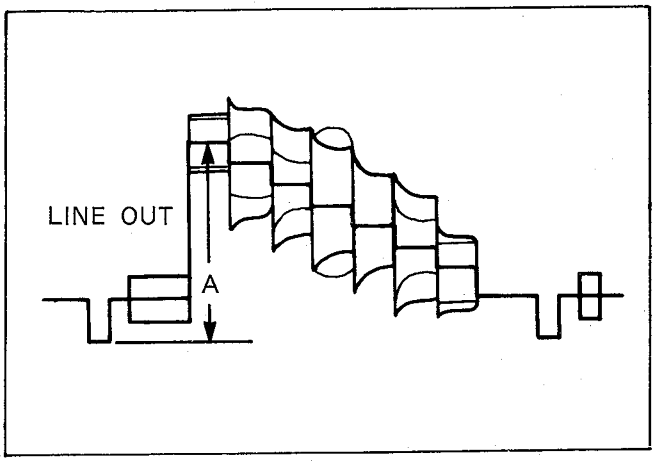


Fig. E4

7. RECORDING CURRENT ADJUSTMENT

7-1. REC CHROMA LEVEL ADJUSTMENT

TP	**ADJ.**	**MODE**	**INPUT**
P5503	VR8503	REC/PLAY	COLOUR BAR
TAPE	**M. EQ.**	**SPEC.**	
BLANK TAPE	OSCILLO-SCOPE	35±5mVp-p	

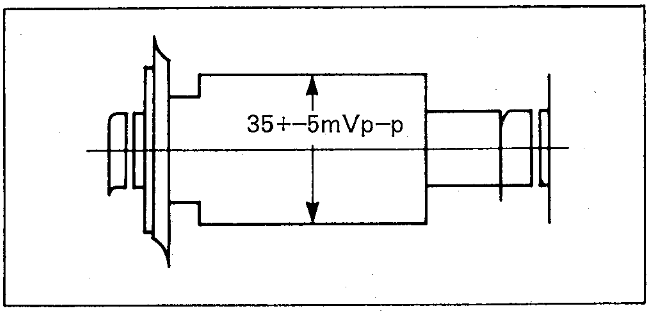


Fig. E5

Condition:
Connect the Electrolytic Capacitor (16V/47u) between TP3006 (+) to GND (–).

7-2. LUMINANCE RECORDING CURRENT ADJUSTMENT

TP	**ADJ.**	**MODE**	**INPUT**
P5503	VR3002	REC/PLAY	COLOUR BAR
TAPE	**M. EQ.**	**SPEC.**	
BLANK TAPE	OSCILLO-SCOPE	130±5mVp-p	

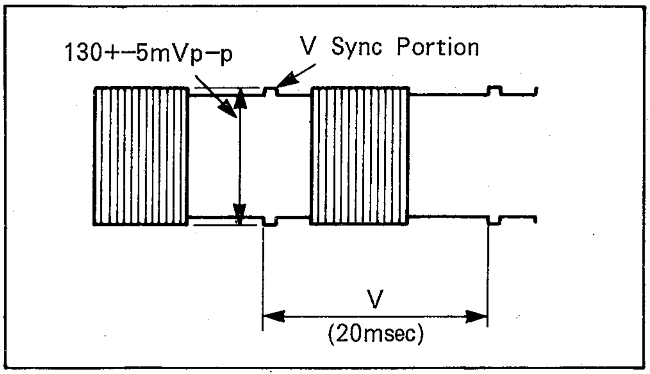

130+–5mVp–p
V Sync Portion
V
(20msec)

Fig. E6

Condition:
Make a short circuit between TP8506 to TP8501.

8. REC BELL FILTER ADJUSTMENT

TP	**ADJ.**	**MODE**	**INPUT**
TP8503	T8501	REC/PLAY	4.286MHz CW SIGNAL
TAPE	**M. EQ.**	**SPEC.**	
BLANK TAPE	OSCILLO-SCOPE		

(1) Set the swwp generator to CW mode.
(2) Adjust CW frequency to 4.286MHz.
(3) Set the colour switch to "COULEUR".

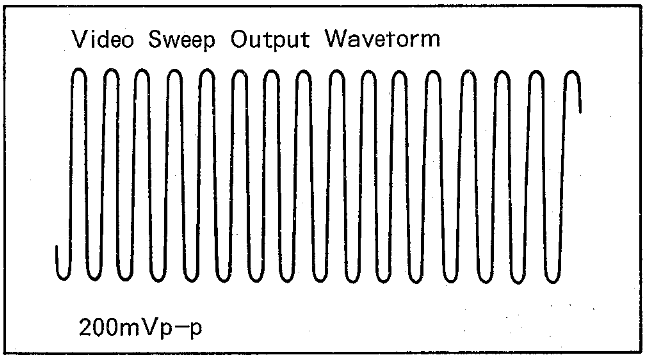

Video Sweep Output Waveform
200mVp–p

Fig. E7

(4) Supply the CW signal to TP8507.
(5) Adjust the amplitude of CW signal so that amplitude at IC8501–1 become 200mVp–p.
(6) Adjust T8501 so that the waveform becomes maximum.

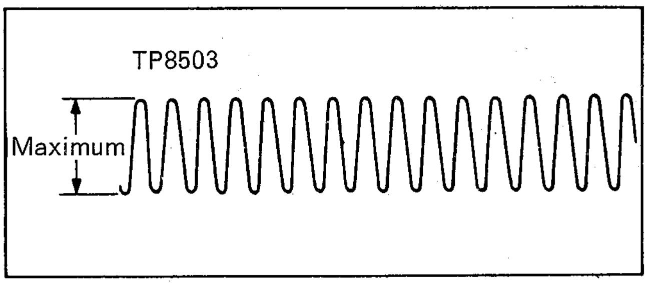

TP8503
Maximum

Fig. E8

9. PLAY BACK LEVEL ADJUSTMENT

TP	ADJ.	MODE	INPUT
VIDEO OUT	VR3004 (A) VR8502 (B)	SELF RECORDING AND PLAYBACK	COLOUR BAR
TAPE	**M. EQ.**	**SPEC.**	
BLANK TAPE	OSCILLO-SCOPE	A=1.0±0.05Vp-p (VR3004) B=0.21±0.02Vp-p (VR8502)	

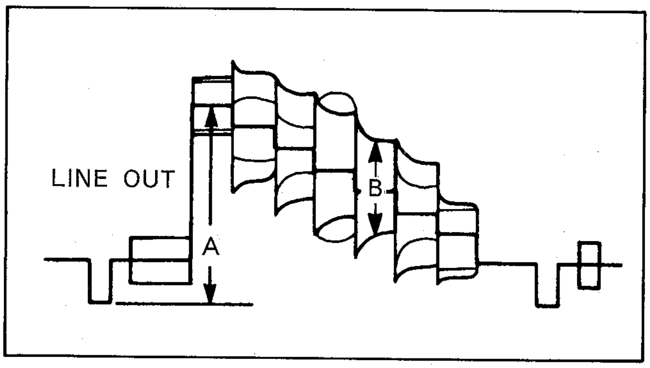


Fig. E9

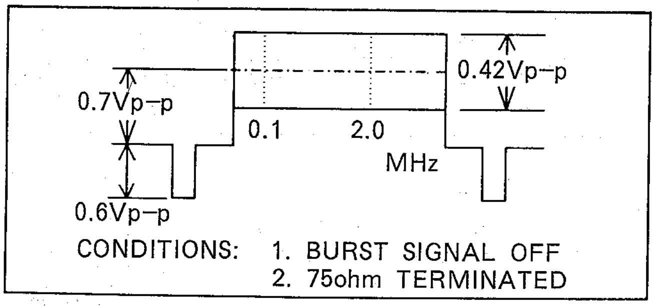
10. HEAD AMP FREQUENCY RESPONSE ADJUSTMENT

TP	ADJ.	MODE	INPUT
VIDEO OUT	VR3005	SELF RECORDING	VIDEO SWEEP SIGNAL
TAPE	**M. EQ.**	**SPEC.**	
BLANK TAPE	VIDEO SWEEP/ OSCILLO-SCOPE	A: 0±1dB (89～112%)	

Note:

Edit switch must be off.
Connect the jumper wire between TP8506 to TP8501.

1. Set the sweep generator output as shown below.



CONDITIONS: 1. BURST SIGNAL OFF
2. 75ohm TERMINATED

Fig. E10

2. Supply the sweep signal to video circuit through the Y/C separator.
3. Record the sweep signal for a few minutes.
4. Play back the just recorded portion.
5. Adjust VR3005 so that the level at 2MHz (A) becomes within specification comparing with the level at 0.1MHz as shown in Fig. E10.

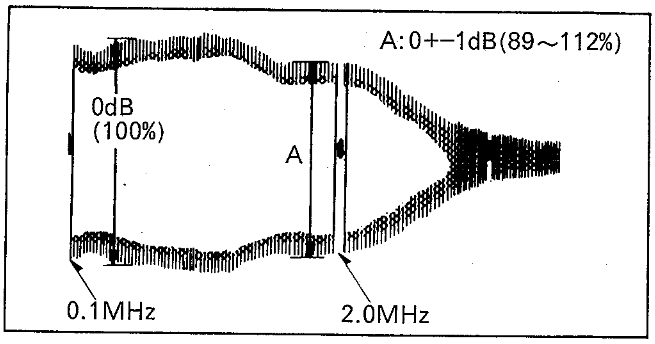


Fig. E11

11. BLANKING PULSE PHASE ADJUSTMENT.

TP	ADJ.	MODE	INPUT
VIDEO OUT TP8505	VR8501	REC/PLAY	COLOUR BAR
TAPE	**M. EQ.**	**SPEC.**	
BLANK TAPE	OSCILLO-SCOPE	0.0±0.1µsec.	

(1) Set the colour SW to "COULEUR" side.
(2) Connect the CH1 to VIDEO OUT and CH2 of scope to TP8505.
(3) Adjust the VR8501 so that time differenve between H–Sync. and Blanking pulse become 0.0+–0.1usec. as shown below.

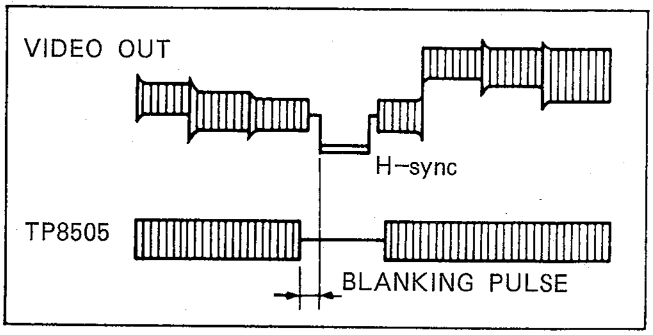


Fig. E12

12. PLAYBACK BELL FILTER ADJUSTMENT

TP	ADJ.	MODE	INPUT
TP8504	TP8502	PLAY	4.286 MHz CW SIGNAL
TAPE	**M. EQ.**	**SPEC.**	
BLANK TAPE	OSCILLO-SCOPE	MINIMUM WAVEFORM	

(1) Set the colour switch to "COULEUR" side.
(2) Set the CW signal output to 4.286MHz (200mVp-p).
(3) Connect the JIG asshown in Fig. E13.

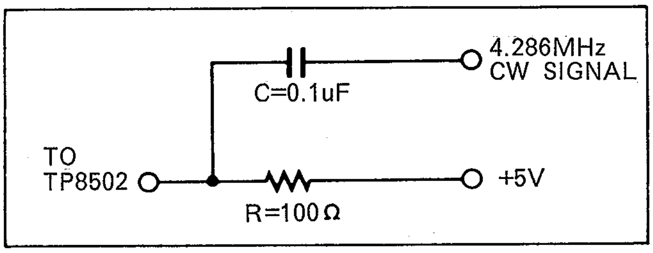


Fig. E13

(4) Adjust T8502 so that the waveform becomes minimum.

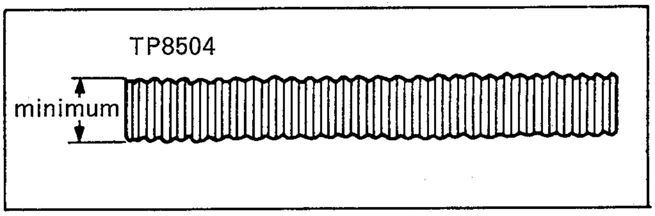


Fig. E14

AUDIO SECTION

13. AUDIO BIAS CURRENT ADJUSTMENT

TP	ADJ.	MODE	INPUT
TP4002 (HOT) TP4003 (GND)	VR4002	REC/PLAY	
TAPE	**M. EQ.**	**SPEC.**	
BLANK TAPE	D.V.M.	2.7 mVrms ± 0.1 mVrms	

14. AUDIO PLAYBACK LEVEL ADJUSTMENT

TP	ADJ.	MODE	INPUT
AUDIO OUT	VR4001	SELF RECORDING	1 kHz AUDIO 0dB SIGNAL/ VIDEO SIGNAL
TAPE	**M. EQ.**	**SPEC.**	
BLANK TAPE	SIGNAL GENERA-TOR/D.V.M.	−8.0dBV ± 1dB	

1. Supply the audio signal (1KHz/0dBV sine wave) to Audio circuit through P4001. (Refer to Fig. E1).
2. Adjust VR4001 so that the level is −8dBV+−1dB.

SYSTEM CONTROL SECTION

15. CHARACTER POSITION ADJUSTMENT

TP	ADJ.	MODE	INPUT
VIEW FINDER	C6003	STOP	
TAPE	**M. EQ.**	**SPEC.**	
	VIEW FINDER	CHARACTER IS CENTRE	

1. Connect the EVF unit to the VTR unit.
2. Display the battery remaining indicator and counter number on the EVF.
3. Adjust the osc control (C6003) so that the character position is shown below.

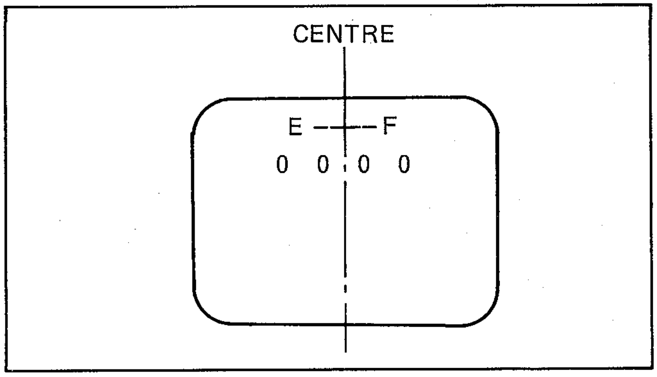


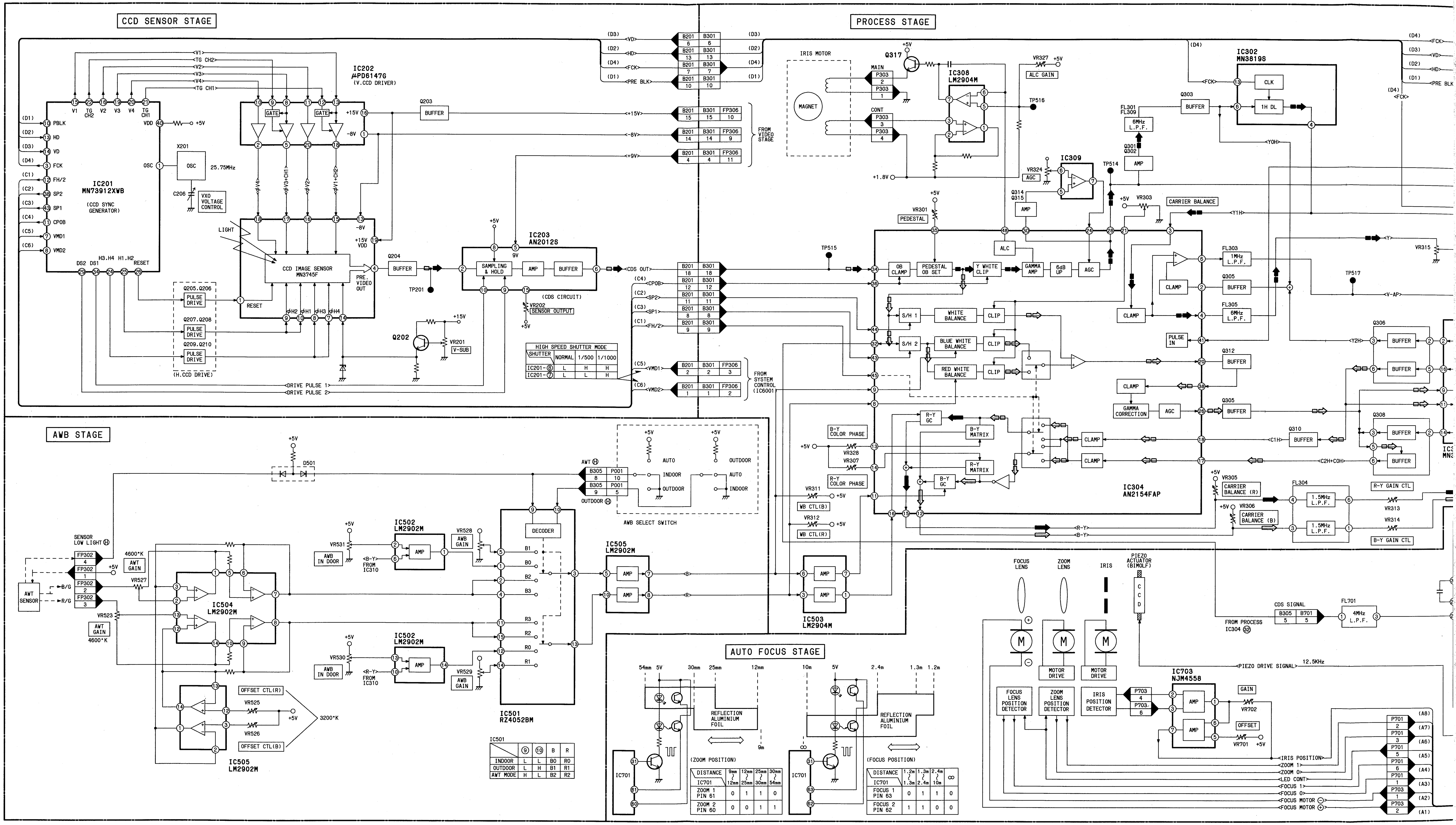
Fig. E15

MEMO:

SECTION 3
BLOCK DIAGRAMS & SCHEMATIC DIAGRAMS

3-1. CAMERA STAGE BLOCK DIAGRAM

LUMINANCE SIGNAL
PRE VIDEO SIGNAL
CHROMINANCE SIGNAL
B-Y/R-Y COMPOSITE SIGNAL
R-Y SIGNAL
B-Y SIGNAL



CCD SENSOR STAGE
PROCESS STAGE
AWB STAGE
AUTO FOCUS STAGE
IC201 MN73912XWB (CCD SYNC GENERATOR)
IC202 μPD6147G (V.CCD DRIVER)
IC203 AN2012S
(CDS CIRCUIT)
CCD IMAGE SENSOR MN3745F
X201 OSC 25.75MHz
VXO VOLTAGE CONTROL
Q202
Q203 BUFFER
Q204 BUFFER
Q205.Q206 PULSE DRIVE
Q207.Q208 PULSE DRIVE
Q209.Q210 PULSE DRIVE
(H.CCD DRIVE)
VR201 V-SUB
VR202 SENSOR OUTPUT
SAMPLING & HOLD
AMP
BUFFER
CDS OUT
DRIVE PULSE 1
DRIVE PULSE 2
FROM VIDEO STAGE
FROM SYSTEM CONTROL (IC6001)
IRIS MOTOR
MAGNET
Q317
IC308 LM2904M
ALC GAIN
IC309
IC302 MN3819S
CLK
1H DL
IC304 AN2154FAP
OB CLAMP
PEDESTAL OB SET
Y WHITE CLIP
GAMMA AMP
6dB UP
AGC
ALC
S/H 1
S/H 2
WHITE BALANCE
BLUE WHITE BALANCE
RED WHITE BALANCE
CLIP
R-Y GC
B-Y GC
B-Y MATRIX
R-Y MATRIX
B-Y COLOR PHASE
R-Y COLOR PHASE
WB CTL(B)
WB CTL(R)
CARRIER BALANCE
CARRIER BALANCE (R)
CARRIER BALANCE (B)
R-Y GAIN CTL
B-Y GAIN CTL
GAMMA CORRECTION
FL303 1MHz L.P.F.
FL305 6MHz L.P.F.
FL301 FL309 6MHz L.P.F.
FL304 1.5MHz L.P.F.
FL701 4MHz L.P.F.
AWT SENSOR
AWT GAIN
SENSOR LOW LIGHT
IC504 LM2902M
IC505 LM2902M
IC502 LM2902M
IC501 RZ4052BM
DECODER
IC503 LM2904M
AWB IN DOOR
AWB GAIN
OFFSET CTL(R)
OFFSET CTL(B)
3200°K
4600°K
AWB SELECT SWITCH
AUTO
INDOOR
OUTDOOR
FOCUS LENS
ZOOM LENS
IRIS
PIEZO ACTUATOR (BIMOLF)
MOTOR DRIVE
FOCUS LENS POSITION DETECTOR
ZOOM LENS POSITION DETECTOR
IRIS POSITION DETECTOR
IC703 NJM4558
GAIN
OFFSET
PIEZO DRIVE SIGNAL 12.5KHz
CDS SIGNAL
FROM PROCESS IC304 ㉜
IC701
REFLECTION ALUMINIUM FOIL
IRIS POSITION
ZOOM 1
ZOOM 0
LED CONT
FOCUS 1
FOCUS 0
FOCUS MOTOR ⊖
FOCUS MOTOR ⊕

HIGH SPEED SHUTTER MODE

SHUTTER	NORMAL	1/500	1/1000
IC201-⑧	L	H	H
IC201-⑦	L	L	H

IC501

	⑨	⑩	B	R
INDOOR	L	L	B0	R0
OUTDOOR	L	H	B1	R1
AWT MODE	H	L	B2	R2

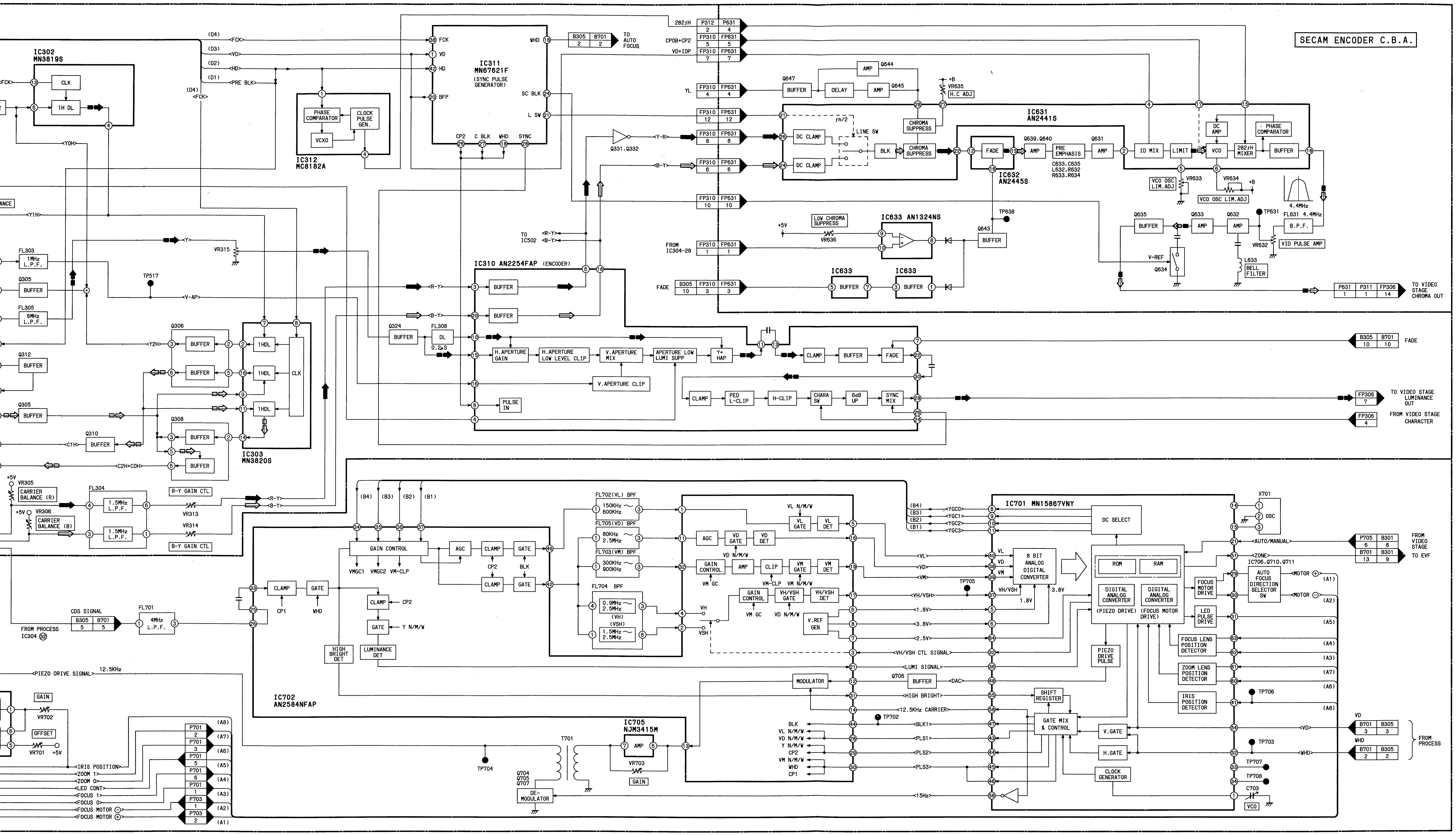
(ZOOM POSITION)

DISTANCE / IC701	9mm ~ 12mm	12mm ~ 25mm	25mm ~ 30mm	30mm ~ 54mm
ZOOM 1 PIN 61	0	1	1	0
ZOOM 2 PIN 60	0	0	1	1

(FOCUS POSITION)

DISTANCE / IC701	1.2m ~ 1.3m	1.3m ~ 2.4m	2.4m ~ 10m	∞
FOCUS 1 PIN 63	0	1	1	0
FOCUS 2 PIN 62	1	1	0	0

R-Y SIGNAL
B-Y SIGNAL

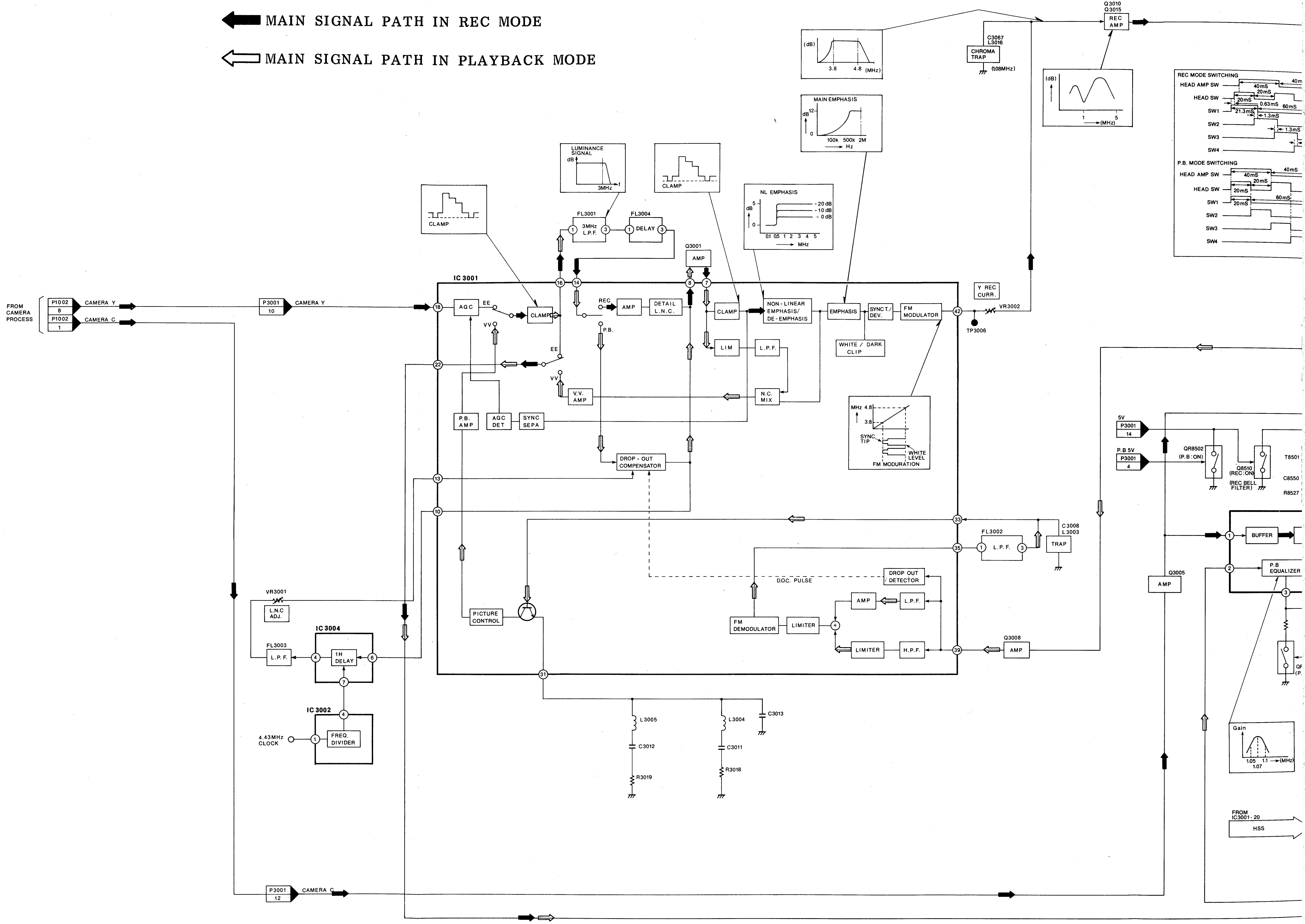


SECAM ENCODER C.B.A.
IC302 MN3819S
CLK
1H DL
IC312 MC8182A
PHASE COMPARATOR
CLOCK PULSE GEN.
VCXO
IC311 MN67621F (SYNC PULSE GENERATOR)
FCK
VD
HD
BFP
WHD
SC BLK
L SW
CP2
C BLK
SYNC
TO AUTO FOCUS
282fH
CPOB+CP2
VD+IDP
YL
P312
P631
FP310
FP631
Q647 BUFFER
DELAY
AMP
Q644
Q645
VR635 H.C ADJ
IC631 AN2441S
DC CLAMP
fh/2
LINE SW
BLK
CHROMA SUPPRESS
FADE
IC632 AN2445S
Q639.Q640
PRE EMPHASIS
Q631
ID MIX
LIMIT
VCO
DC AMP
PHASE COMPARATOR
282fH MIXER
BUFFER
C633.C635 L632.R632 R633.R634
VR633 VCO OSC LIM.ADJ
VR634 VCO OSC LIM.ADJ
4.4MHz
FL631 4.4MHz B.P.F.
TP631
Q635
Q633
Q632
VR632 VID PULSE AMP
V-REF
Q634
L633 BELL FILTER
Q331.Q332
TP638
Q643 BUFFER
IC633 AN1324NS
LOW CHROMA SUPPRESS
VR636
+5V
FROM IC304-28
IC633 BUFFER
TO VIDEO STAGE CHROMA OUT
TO IC502
IC310 AN2254FAP (ENCODER)
Q324 BUFFER
FL308 DL 0.2μS
H.APERTURE GAIN
H.APERTURE LOW LEVEL CLIP
V.APERTURE MIX
APERTURE LOW LUMI SUPP
Y+HAP
V.APERTURE CLIP
PULSE IN
CLAMP
PED L-CLIP
H-CLIP
CHARA SW
6dB UP
SYNC MIX
TO VIDEO STAGE LUMINANCE OUT
FROM VIDEO STAGE CHARACTER
FL303 1MHz L.P.F.
Q305 BUFFER
FL305 6MHz L.P.F.
Q312 BUFFER
Q306
Q308
Q310
VR315
TP517
IC303 MN3820S
1HDL
VR305 CARRIER BALANCE (R)
VR306 CARRIER BALANCE (B)
FL304 1.5MHz L.P.F.
VR313 R-Y GAIN CTL
VR314 B-Y GAIN CTL
CDS SIGNAL
FL701 4MHz L.P.F.
FROM PROCESS IC304 32
PIEZO DRIVE SIGNAL 12.5KHz
GAIN VR702
OFFSET VR701
IC702 AN2584NFAP
GAIN CONTROL
AGC
CLAMP
GATE
HIGH BRIGHT DET
LUMINANCE DET
VMGC1 VMGC2 VM-CLP
FL702(VL) BPF 150KHz 600KHz
FL705(VD) BPF 80KHz 2.5MHz
FL703(VM) BPF 300KHz 900KHz
FL704 BPF 0.9MHz 2.5MHz 1.5MHz 2.5MHz
VL GATE
VL DET
VD GATE
VD DET
VM GATE
VM DET
VH/VSH GATE
VH/VSH DET
V.REF GEN
MODULATOR
IC705 NJM3415M
VR703 GAIN
T701
TP704
Q704 Q705 Q707 DE-MODULATOR
IC701 MN15867VNY
8 BIT ANALOG DIGITAL CONVERTER
DC SELECT
ROM
RAM
DIGITAL ANALOG CONVERTER (PIEZO DRIVE)
DIGITAL ANALOG CONVERTER (FOCUS MOTOR DRIVE)
PIEZO DRIVE PULSE
FOCUS MOTOR DRIVE
LED PULSE DRIVE
FOCUS LENS POSITION DETECTOR
ZOOM LENS POSITION DETECTOR
IRIS POSITION DETECTOR
SHIFT REGISTER
GATE MIX & CONTROL
V.GATE
H.GATE
CLOCK GENERATOR
Q706 BUFFER
X701 OSC
IC706.Q710.Q711 AUTO FOCUS DIRECTION SELECTOR SW
FROM VIDEO STAGE
TO EVF
FROM PROCESS
TP702
TP703
TP705
TP706
TP707
TP708
C703 VCO
IRIS POSITION
ZOOM 1
ZOOM 0
LED CONT
FOCUS 1
FOCUS 0
FOCUS MOTOR
P701
P703
B305
B701
B301
P705

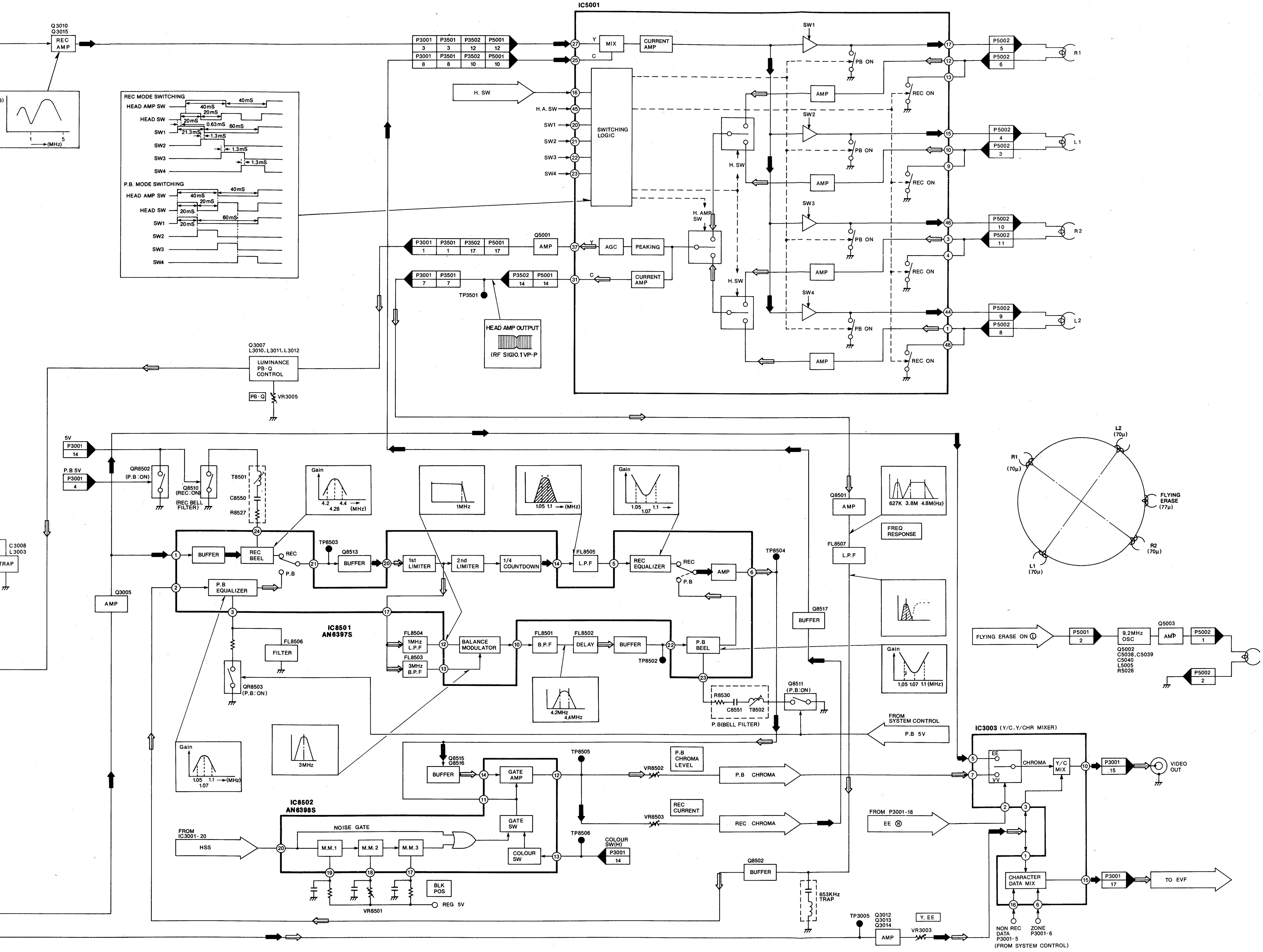
3-2. LUMINANCE & CHROMINANCE BLOCK DIAGRAM

◀ MAIN SIGNAL PATH IN REC MODE

◁ MAIN SIGNAL PATH IN PLAYBACK MODE

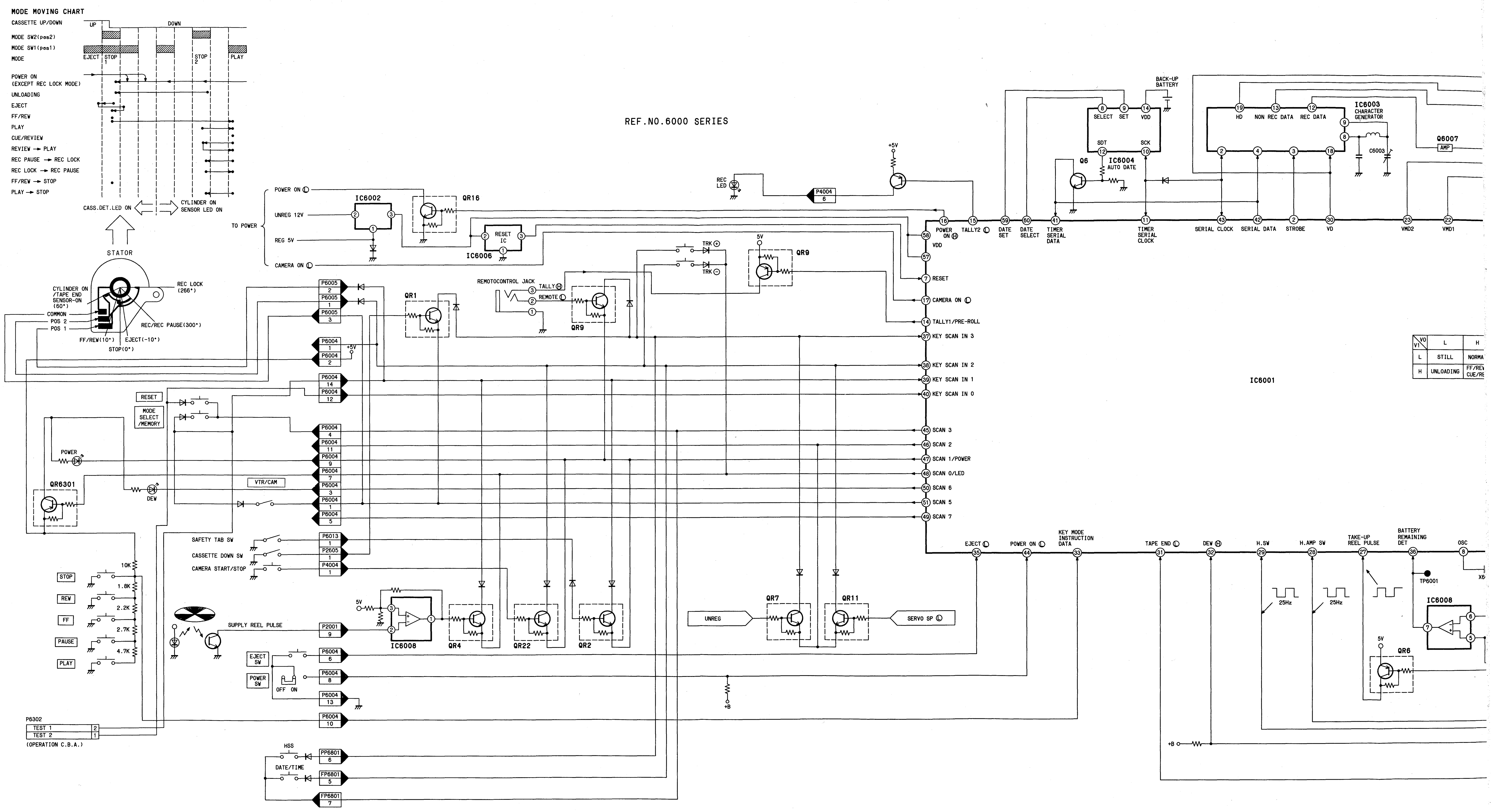

FROM CAMERA PROCESS
P1002 8 CAMERA Y
P1002 1 CAMERA C
P3001 10 CAMERA Y
IC 3001
AGC
EE
VV
CLAMP
REC
P.B.
AMP
DETAIL L.N.C.
CLAMP
NON-LINEAR EMPHASIS/ DE-EMPHASIS
EMPHASIS
SYNC T./ DEV.
FM MODULATOR
WHITE / DARK CLIP
LIM
L.P.F.
N.C. MIX
V.V. AMP
P.B. AMP
AGC DET
SYNC SEPA
DROP - OUT COMPENSATOR
PICTURE CONTROL
FM DEMODULATOR
LIMITER
AMP
L.P.F.
LIMITER
H.P.F.
DROP OUT / DETECTOR
D.O.C. PULSE
LUMINANCE SIGNAL
dB
f
3MHz
FL3001
3MHz L.P.F.
FL3004
DELAY
Q3001
AMP
CLAMP
NL EMPHASIS
dB
5
0
- 20 dB
- 10 dB
- 0 dB
0.1 0.5 1 2 3 4 5
MHz
MAIN EMPHASIS
dB
12
0
100k 500k 2M
Hz
(dB)
3.8 4.8 (MHz)
C3067 L3016
CHROMA TRAP
(1.08MHz)
Q3010 Q3015
REC AMP
(dB)
1 5
(MHz)
Y REC CURR.
VR3002
TP3006
MHz 4.8
3.8
SYNC TIP
WHITE LEVEL
FM MODURATION
REC MODE SWITCHING
HEAD AMP SW
HEAD SW
SW1
SW2
SW3
SW4
40mS
20mS
0.63mS
21.3mS
1.3mS
60mS
P.B. MODE SWITCHING
HEAD AMP SW
HEAD SW
SW1
SW2
SW3
SW4
40mS
20mS
60mS
FL3002
L.P.F.
C3008 L3003
TRAP
Q3008
AMP
5V
P3001 14
P.B 5V
P3001 4
QR8502 (P.B:ON)
Q8510 (REC:ON)
(REC BELL FILTER)
T8501
C8550
R8527
BUFFER
P.B EQUALIZER
Q3005
AMP
Gain
1.05 1.1 (MHz)
1.07
FROM IC3001-20
HSS
VR3001
L.N.C ADJ.
FL3003
L.P.F.
IC 3004
1H DELAY
IC 3002
FREQ. DIVIDER
4.43MHz CLOCK
L3005
C3012
R3019
L3004
C3011
R3018
C3013
P3001 12
CAMERA C

Back Page:
CAMERA STAGE Section

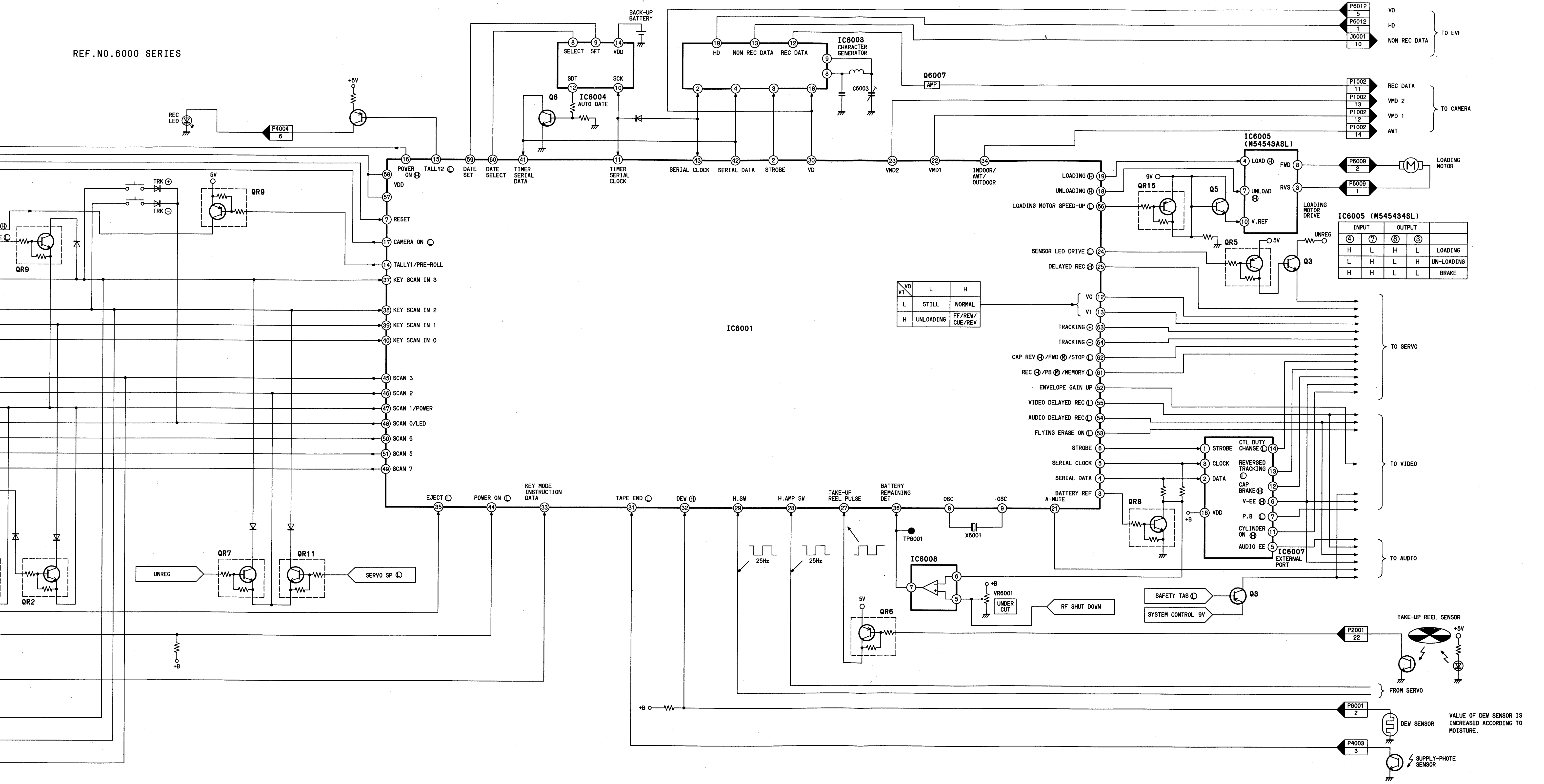


Q3010
Q3015
REC AMP
(MHz)
REC MODE SWITCHING
HEAD AMP SW
HEAD SW
SW1
SW2
SW3
SW4
40mS
20mS
0.63mS
60mS
21.3mS
1.3mS
P.B. MODE SWITCHING
IC5001
P3001
P3501
P3502
P5001
MIX
CURRENT AMP
H. SW
H.A. SW
SWITCHING LOGIC
SW1
SW2
SW3
SW4
PB ON
REC ON
AMP
H. AMP SW
P5002
R1
L1
R2
L2
Q5001
AGC
PEAKING
TP3501
HEAD AMP OUTPUT
(RF SIG)0.1VP-P
Q3007
L3010, L3011, L3012
LUMINANCE PB-Q CONTROL
PB-Q
VR3005
5V
P.B 5V
QR8502
(P.B:ON)
Q8510
(REC:ON)
(REC BELL FILTER)
T8501
C8550
R8527
Gain
4.2
4.4
4.28
(MHz)
1MHz
1.05
1.1
1.07
TP8503
Q8513
BUFFER
REC BEEL
REC
P.B
P.B EQUALIZER
1st LIMITER
2nd LIMITER
1/4 COUNTDOWN
FL8505
L.P.F
REC EQUALIZER
AMP
TP8504
IC8501
AN6397S
FL8506
FILTER
QR8503
(P.B:ON)
FL8504
1MHz L.P.F
FL8503
3MHz B.P.F
BALANCE MODULATOR
FL8501
B.P.F
FL8502
DELAY
TP8502
P.B BEEL
4.2MHz
4.4MHz
R8530
C8551
T8502
P.B(BELL FILTER)
Q8511
(P.B:ON)
Q8501
AMP
FL8507
L.P.F
627K
3.8M
4.8M(Hz)
FREQ RESPONSE
Q8517
BUFFER
C3008
L3003
TRAP
Q3005
AMP
3MHz
Q8515
Q8516
GATE AMP
TP8505
P.B CHROMA LEVEL
VR8502
P.B CHROMA
REC CURRENT
VR8503
REC CHROMA
IC8502
AN6398S
NOISE GATE
FROM IC3001-20
HSS
M.M.1
M.M.2
M.M.3
GATE SW
COLOUR SW
TP8506
COLOUR SW(H)
BLK POS
VR8501
REG 5V
Q8502
653KHz TRAP
TP3005
Q3012
Q3013
Q3014
Y. EE
VR3003
FROM SYSTEM CONTROL
P.B 5V
IC3003 (Y/C, Y/CHR MIXER)
EE
VV
CHROMA
Y/C MIX
VIDEO OUT
FROM P3001-18
EE (H)
CHARACTER DATA MIX
TO EVF
NON REC DATA P3001-5
ZONE P3001-6
(FROM SYSTEM CONTROL)
L2 (70μ)
R1 (70μ)
FLYING ERASE (77μ)
R2 (70μ)
L1 (70μ)
FLYING ERASE ON (L)
9.2MHz OSC
Q5003
Q5002
C5038, C5039
C5040
L5005
R5026
FLYING ERASE HEAD

3-3. SYSTEM CONTROL BLOCK DIAGRAM


MODE MOVING CHART
CASSETTE UP/DOWN
UP
DOWN
MODE SW2(pos2)
MODE SW1(pos1)
MODE
EJECT
STOP 1
STOP 2
PLAY
POWER ON (EXCEPT REC LOCK MODE)
UNLOADING
EJECT
FF/REW
PLAY
CUE/REVIEW
REVIEW → PLAY
REC PAUSE → REC LOCK
REC LOCK → REC PAUSE
FF/REW → STOP
PLAY → STOP
CASS.DET.LED ON
CYLINDER ON SENSOR LED ON
STATOR
CYLINDER ON /TAPE END SENSOR-ON (60°)
COMMON
POS 2
POS 1
REC LOCK (266°)
REC/REC PAUSE(300°)
FF/REW(10°)
EJECT(-10°)
STOP(0°)
REF.NO.6000 SERIES
TO POWER
POWER ON Ⓛ
UNREG 12V
REG 5V
CAMERA ON Ⓛ
IC6002
QR16
RESET IC
IC6006
REC LED
P4004 6
+5V
TRK ⊕
TRK ⊖
5V
QR9
REMOTOCONTROL JACK
TALLY Ⓗ
REMOTE Ⓛ
QR1
QR9
P6005 2
P6005 1
P6005 3
P6004 1
P6004 2
+5V
P6004 14
P6004 12
RESET
MODE SELECT /MEMORY
P6004 4
P6004 11
P6004 9
P6004 7
P6004 3
P6004 1
P6004 5
POWER
QR6301
DEW
VTR/CAM
SAFETY TAB SW
CASSETTE DOWN SW
CAMERA START/STOP
P6013 1
P2605 1
P4004 1
10K
STOP
1.8K
REW
2.2K
FF
2.7K
PAUSE
4.7K
PLAY
SUPPLY REEL PULSE
P2001 9
5V
IC6008
QR4
QR22
QR2
EJECT SW
POWER SW
OFF ON
P6004 6
P6004 8
P6004 13
P6004 10
+B
P6302
TEST 1 2
TEST 2 1
(OPERATION C.B.A.)
HSS
PP6801 6
DATE/TIME
FP6801 5
FP6801 7
UNREG
QR7
QR11
SERVO SP Ⓛ
BACK-UP BATTERY
SELECT
SET
VDD
SDT
SCK
Q6
IC6004 AUTO DATE
HD
NON REC DATA
REC DATA
IC6003 CHARACTER GENERATOR
C6003
Q6007
AMP
POWER ON Ⓗ
VDD
TALLY2 Ⓛ
DATE SET
DATE SELECT
TIMER SERIAL DATA
TIMER SERIAL CLOCK
SERIAL CLOCK
SERIAL DATA
STROBE
VD
VMD2
VMD1
RESET
CAMERA ON Ⓛ
TALLY1/PRE-ROLL
KEY SCAN IN 3
KEY SCAN IN 2
KEY SCAN IN 1
KEY SCAN IN 0
SCAN 3
SCAN 2
SCAN 1/POWER
SCAN 0/LED
SCAN 6
SCAN 5
SCAN 7
IC6001
V0 V1
L
H
STILL
NORMA
UNLOADING
FF/REW CUE/RE
EJECT Ⓛ
POWER ON Ⓛ
KEY MODE INSTRUCTION DATA
TAPE END Ⓛ
DEW Ⓗ
H.SW
H.AMP SW
TAKE-UP REEL PULSE
BATTERY REMAINING DET
OSC
25Hz
25Hz
TP6001
IC6008
5V
QR6
X6
+B

REF.NO.6000 SERIES


IC6001
IC6003
CHARACTER GENERATOR
IC6004
AUTO DATE
IC6005
(M54543ASL)
IC6007
EXTERNAL PORT
IC6008
Q6007
AMP
Q6
Q5
Q3
QR15
QR5
QR8
QR6
QR9
QR7
QR11
QR2
BACK-UP BATTERY
SELECT
SET
VDD
SDT
SCK
HD
NON REC DATA
REC DATA
C6003
REC LED
P4004
6
+5V
5V
TRK ⊕
TRK ⊖
POWER ON Ⓗ
TALLY2 Ⓛ
DATE SET
DATE SELECT
TIMER SERIAL DATA
TIMER SERIAL CLOCK
SERIAL CLOCK
SERIAL DATA
STROBE
VD
VMD2
VMD1
INDOOR/ AWT/ OUTDOOR
RESET
CAMERA ON Ⓛ
TALLY1/PRE-ROLL
KEY SCAN IN 3
KEY SCAN IN 2
KEY SCAN IN 1
KEY SCAN IN 0
SCAN 3
SCAN 2
SCAN 1/POWER
SCAN 0/LED
SCAN 6
SCAN 5
SCAN 7
EJECT Ⓛ
POWER ON Ⓛ
KEY MODE INSTRUCTION DATA
TAPE END Ⓛ
DEW Ⓗ
H.SW
H.AMP SW
TAKE-UP REEL PULSE
BATTERY REMAINING DET
OSC
A-MUTE
LOADING Ⓗ
UNLOADING Ⓗ
LOADING MOTOR SPEED-UP Ⓛ
SENSOR LED DRIVE Ⓛ
DELAYED REC Ⓗ
VO
V1
TRACKING ⊕
TRACKING ⊖
CAP REV Ⓗ/FWD Ⓜ/STOP Ⓛ
REC Ⓗ/PB Ⓜ/MEMORY Ⓛ
ENVELOPE GAIN UP
VIDEO DELAYED REC Ⓛ
AUDIO DELAYED REC Ⓛ
FLYING ERASE ON Ⓛ
STROBE
SERIAL CLOCK
SERIAL DATA
BATTERY REF
LOAD Ⓗ
UNLOAD Ⓗ
V.REF
FWD
RVS
LOADING MOTOR DRIVE
9V
UNREG
STROBE
CLOCK
DATA
VDD
CTL DUTY CHANGE Ⓛ
REVERSED TRACKING Ⓛ
CAP BRAKE Ⓗ
V-EE Ⓗ
P.B Ⓛ
CYLINDER ON Ⓗ
AUDIO EE
P6012
5
P6012
1
J6001
10
VD
HD
NON REC DATA
TO EVF
P1002
11
P1002
13
P1002
12
P1002
14
REC DATA
VMD 2
VMD 1
AWT
TO CAMERA
P6009
2
P6009
1
LOADING MOTOR
TO SERVO
TO VIDEO
TO AUDIO
UNREG
SERVO SP Ⓛ
+B
TP6001
X6001
25Hz
25Hz
VR6001
UNDER CUT
RF SHUT DOWN
SAFETY TAB Ⓛ
SYSTEM CONTROL 9V
TAKE-UP REEL SENSOR
P2001
22
FROM SERVO
P6001
2
DEW SENSOR
VALUE OF DEW SENSOR IS INCREASED ACCORDING TO MOISTURE.
P4003
3
SUPPLY-PHOTE SENSOR

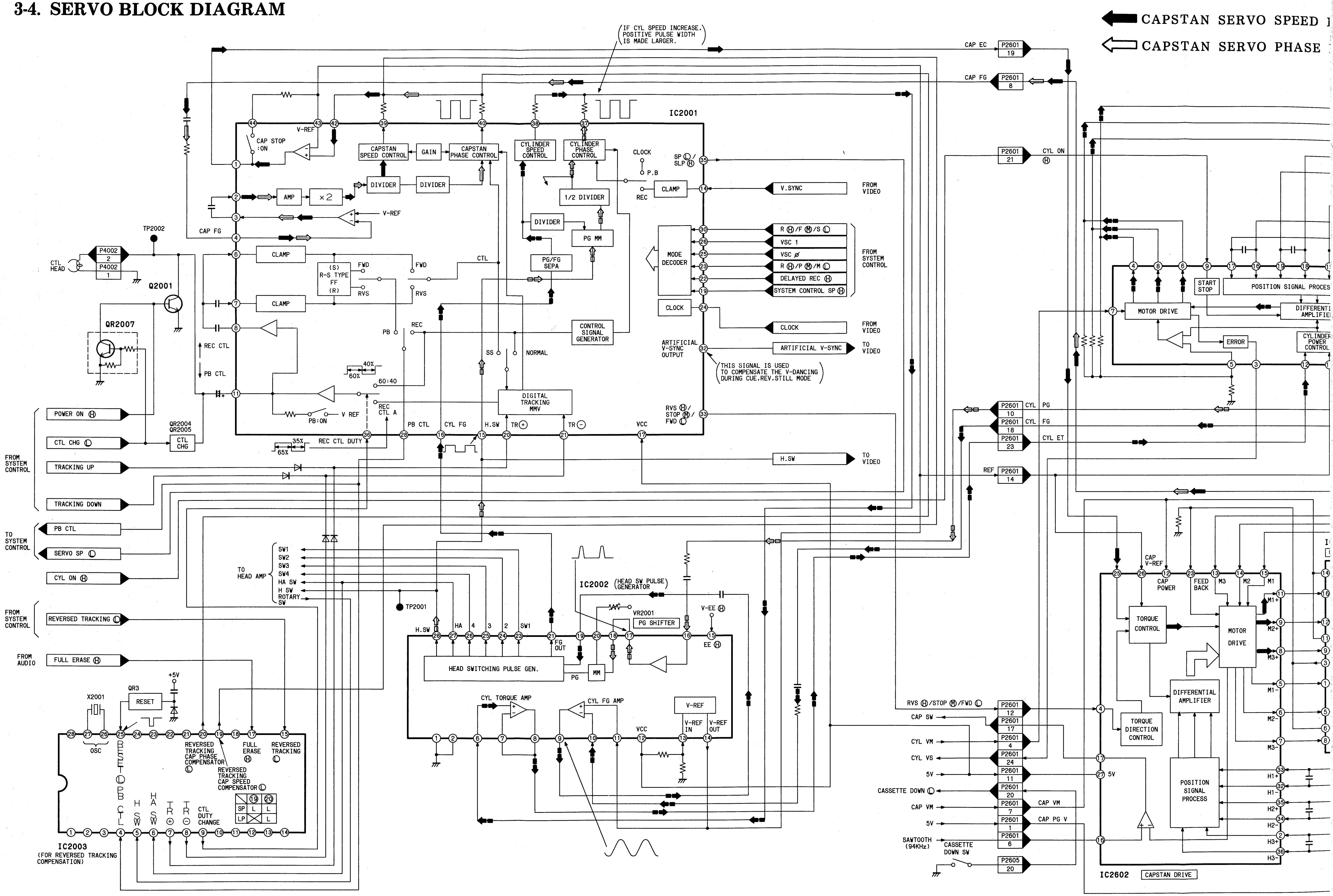
V1 \ VO	L	H
L	STILL	NORMAL
H	UNLOADING	FF/REW/ CUE/REV

IC6005 (M545434SL)

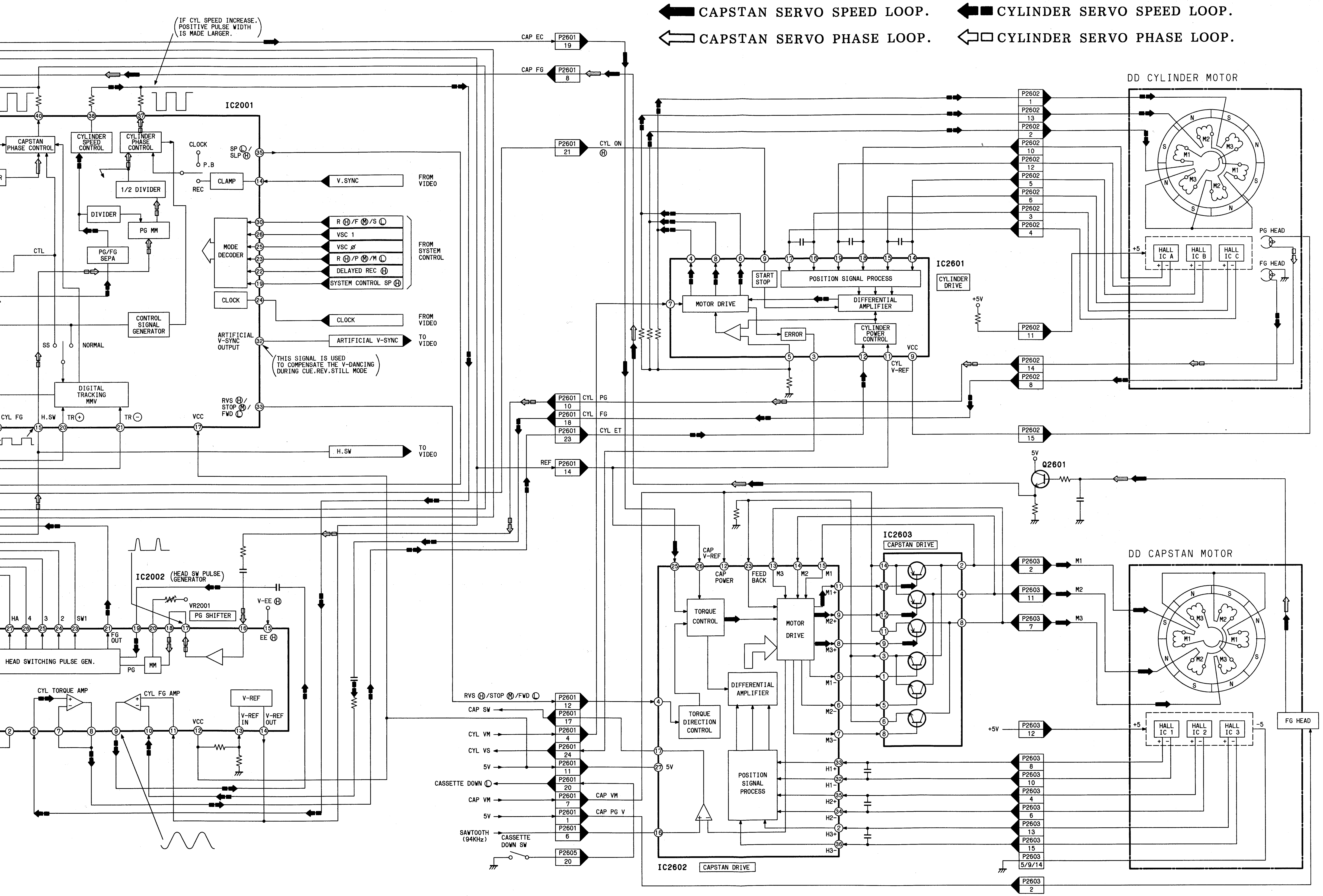
INPUT		OUTPUT		
④	⑦	⑧	③	
H	L	H	L	LOADING
L	H	L	H	UN-LOADING
H	H	L	L	BRAKE

Next Page:
SERVO Section

3-4. SERVO BLOCK DIAGRAM

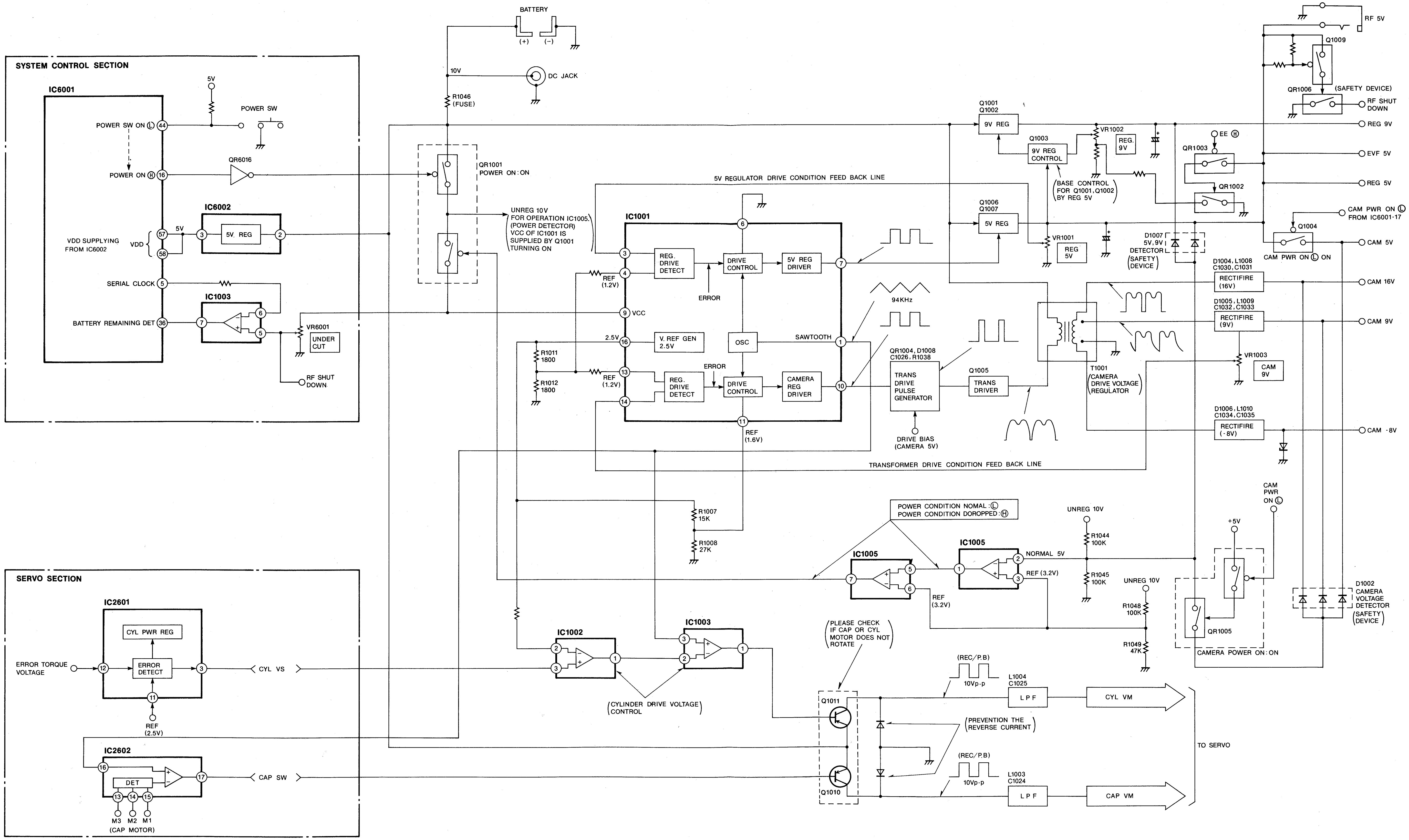

CAPSTAN SERVO SPEED
CAPSTAN SERVO PHASE
IF CYL SPEED INCREASE. POSITIVE PULSE WIDTH IS MADE LARGER.
IC2001
CAP STOP :ON
V-REF
CAPSTAN SPEED CONTROL
GAIN
CAPSTAN PHASE CONTROL
CYLINDER SPEED CONTROL
CYLINDER PHASE CONTROL
CLOCK
P.B
REC
SP Ⓛ/ SLP Ⓗ
CLAMP
V.SYNC
FROM VIDEO
AMP
×2
DIVIDER
DIVIDER
1/2 DIVIDER
DIVIDER
PG MM
PG/FG SEPA
CAP FG
TP2002
P4002
CTL HEAD
Q2001
QR2007
CLAMP
(S) R-S TYPE FF (R)
FWD
RVS
CTL
MODE DECODER
R Ⓗ/F Ⓜ/S Ⓛ
VSC 1
VSC ⌀
R Ⓗ/P Ⓜ/M Ⓛ
DELAYED REC Ⓗ
SYSTEM CONTROL SP Ⓗ
FROM SYSTEM CONTROL
CLOCK
FROM VIDEO
REC CTL
PB CTL
PB
REC
CONTROL SIGNAL GENERATOR
SS
NORMAL
ARTIFICIAL V-SYNC OUTPUT
ARTIFICIAL V-SYNC
TO VIDEO
THIS SIGNAL IS USED TO COMPENSATE THE V-DANCING DURING CUE.REV.STILL MODE
40%
60%
60:40
V REF
PB:ON
REC CTL A
DIGITAL TRACKING MMV
RVS Ⓗ/ STOP Ⓜ/ FWD Ⓛ
PB CTL
CYL FG
H.SW
TR⊕
TR⊖
VCC
35%
65%
REC CTL DUTY
POWER ON Ⓗ
CTL CHG Ⓛ
QR2004 QR2005
CTL CHG
TRACKING UP
TRACKING DOWN
FROM SYSTEM CONTROL
H.SW
TO VIDEO
TO SYSTEM CONTROL
PB CTL
SERVO SP Ⓛ
CYL ON Ⓗ
SW1
SW2
SW3
SW4
HA SW
H SW
ROTARY SW
TO HEAD AMP
TP2001
FROM SYSTEM CONTROL
REVERSED TRACKING Ⓛ
FROM AUDIO
FULL ERASE Ⓗ
IC2002 (HEAD SW PULSE GENERATOR)
VR2001
PG SHIFTER
V-EE Ⓗ
EE Ⓗ
H.SW
HA
FG OUT
HEAD SWITCHING PULSE GEN.
PG
MM
CYL TORQUE AMP
CYL FG AMP
V-REF
V-REF IN
V-REF OUT
VCC
X2001
OSC
QR3
RESET
+5V
REVERSED TRACKING CAP PHASE COMPENSATOR Ⓛ
REVERSED TRACKING CAP SPEED COMPENSATOR Ⓛ
FULL ERASE Ⓗ
REVERSED TRACKING Ⓛ
RST
Ⓛ
PB CTL
H SW
HA SW
TR⊕
TR⊖
CTL DUTY CHANGE
SP L L
LP L
IC2003 (FOR REVERSED TRACKING COMPENSATION)
CAP EC
P2601 19
CAP FG
P2601 8
P2601 21
CYL ON Ⓗ
P2601 10
CYL PG
P2601 18
CYL FG
P2601 23
CYL ET
REF
P2601 14
START STOP
POSITION SIGNAL PROCES
MOTOR DRIVE
DIFFERENTI AMPLIFIEI
ERROR
CYLINDER POWER CONTROL
RVS Ⓗ/STOP Ⓜ/FWD Ⓛ
P2601 12
CAP SW
P2601 17
CYL VM
P2601 4
CYL VS
P2601 24
5V
P2601 20
CASSETTE DOWN Ⓛ
P2601 11
CAP VM
P2601 7
5V
P2601 1
SAWTOOTH (94KHz)
P2601 6
CASSETTE DOWN SW
P2605 20
CAP VM
CAP PG V
CAP V-REF
CAP POWER
FEED BACK
M3
M2
M1
TORQUE CONTROL
MOTOR DRIVE
DIFFERENTIAL AMPLIFIER
TORQUE DIRECTION CONTROL
POSITION SIGNAL PROCESS
M1+
M2+
M3+
M1-
M2-
M3-
H1+
H1-
H2+
H2-
H3+
H3-
5V
IC2602
CAPSTAN DRIVE

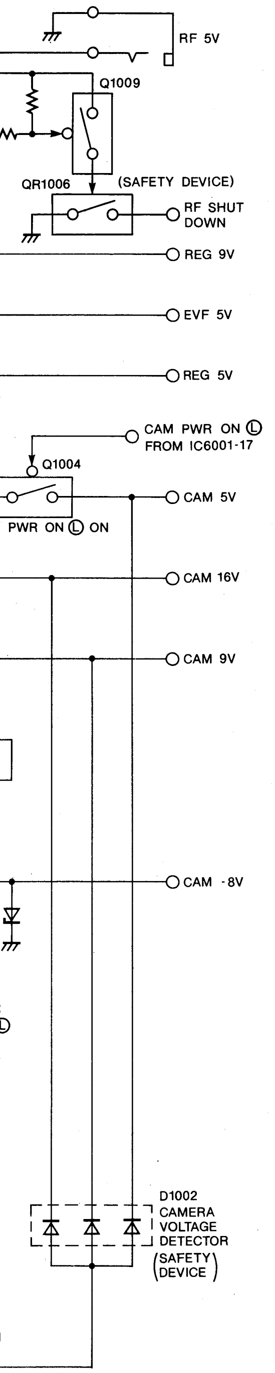
CAPSTAN SERVO SPEED LOOP.
CAPSTAN SERVO PHASE LOOP.
CYLINDER SERVO SPEED LOOP.
CYLINDER SERVO PHASE LOOP.



(IF CYL SPEED INCREASE. POSITIVE PULSE WIDTH IS MADE LARGER.)
IC2001
CAPSTAN PHASE CONTROL
CYLINDER SPEED CONTROL
CYLINDER PHASE CONTROL
CLOCK
P.B
REC
CLAMP
1/2 DIVIDER
DIVIDER
PG MM
PG/FG SEPA
CTL
MODE DECODER
CLOCK
CONTROL SIGNAL GENERATOR
SS
NORMAL
DIGITAL TRACKING MMV
CYL FG
H.SW
TR(+)
TR(−)
VCC
SP Ⓛ/SLP Ⓗ
V.SYNC
FROM VIDEO
R Ⓗ/F Ⓜ/S Ⓛ
VSC 1
VSC ∅
R Ⓗ/P Ⓜ/M Ⓛ
DELAYED REC Ⓗ
SYSTEM CONTROL SP Ⓗ
FROM SYSTEM CONTROL
CLOCK
FROM VIDEO
ARTIFICIAL V-SYNC OUTPUT
ARTIFICIAL V-SYNC
TO VIDEO
(THIS SIGNAL IS USED TO COMPENSATE THE V-DANCING DURING CUE.REV.STILL MODE)
RVS Ⓗ/STOP Ⓜ/FWD Ⓛ
H.SW
TO VIDEO
CAP EC
P2601 19
CAP FG
P2601 8
P2601 21
CYL ON Ⓗ
P2601 10 CYL PG
P2601 18 CYL FG
P2601 23 CYL ET
REF
P2601 14
IC2002 (HEAD SW PULSE GENERATOR)
VR2001
PG SHIFTER
V-EE Ⓗ
HA
SW1
FG OUT
EE Ⓗ
HEAD SWITCHING PULSE GEN.
PG
MM
CYL TORQUE AMP
CYL FG AMP
V-REF
V-REF IN
V-REF OUT
VCC
RVS Ⓗ/STOP Ⓜ/FWD Ⓛ
CAP SW
CYL VM
CYL VS
5V
CASSETTE DOWN Ⓛ
CAP VM
5V
SAWTOOTH (94KHz)
CASSETTE DOWN SW
P2601 12
P2601 17
P2601 4
P2601 11
P2601 24
P2601 20
P2601 7
P2601 1
P2601 6
P2605 20
CAP VM
CAP PG V
DD CYLINDER MOTOR
P2602 1
P2602 13
P2602 2
P2602 10
P2602 12
P2602 5
P2602 6
P2602 3
P2602 4
P2602 11
P2602 14
P2602 8
P2602 15
IC2601
CYLINDER DRIVE
START STOP
POSITION SIGNAL PROCESS
MOTOR DRIVE
DIFFERENTIAL AMPLIFIER
ERROR
CYLINDER POWER CONTROL
VCC
CYL V-REF
+5V
HALL IC A
HALL IC B
HALL IC C
PG HEAD
FG HEAD
N
S
M1
M2
M3
5V
Q2601
IC2603
CAPSTAN DRIVE
CAP V-REF
CAP POWER
FEED BACK
TORQUE CONTROL
MOTOR DRIVE
DIFFERENTIAL AMPLIFIER
TORQUE DIRECTION CONTROL
POSITION SIGNAL PROCESS
5V
M1+
M2+
M3+
M1−
M2−
M3−
H1+
H1−
H2+
H2−
H3+
H3−
IC2602
CAPSTAN DRIVE
DD CAPSTAN MOTOR
P2603 2
P2603 11
P2603 7
M1
M2
M3
+5V
P2603 12
HALL IC 1
HALL IC 2
HALL IC 3
FG HEAD
P2603 8
P2603 10
P2603 4
P2603 6
P2603 13
P2603 15
P2603 5/9/14
P2603 2

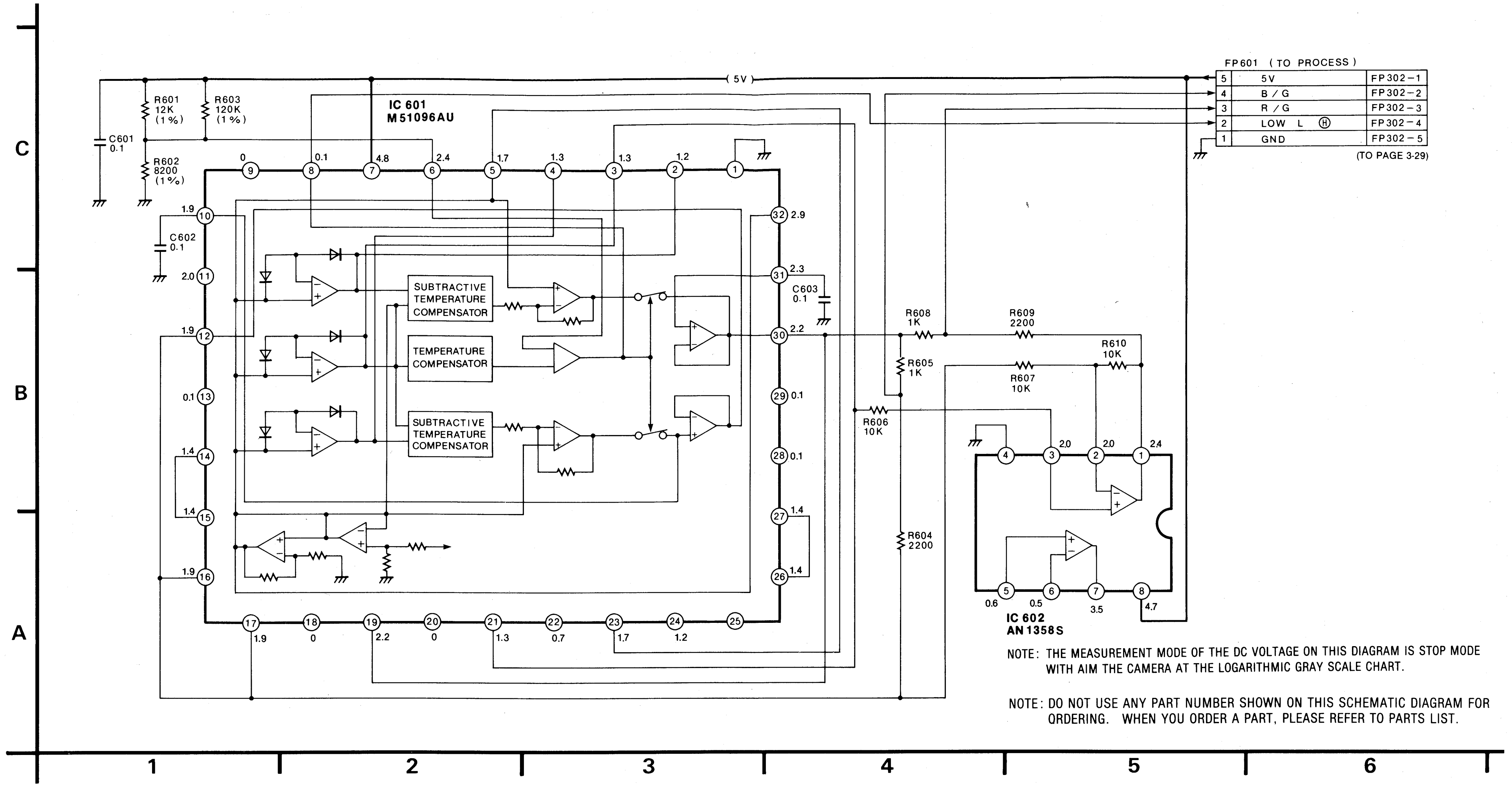
3-5. POWER SUPPLY BLOCK DIAGRAM


SYSTEM CONTROL SECTION
IC6001
5V
POWER SW
POWER SW ON Ⓛ 44
POWER ON Ⓗ 16
QR6016
IC6002
VDD SUPPLYING FROM IC6002
VDD
57
58
5V
3
5V. REG
2
SERIAL CLOCK 5
IC1003
BATTERY REMAINING DET 36
7
6
5
VR6001
UNDER CUT
RF SHUT DOWN
BATTERY
(+)
(−)
10V
DC JACK
R1046 (FUSE)
QR1001 POWER ON : ON
UNREG 10V
FOR OPERATION IC1005.
(POWER DETECTOR)
VCC OF IC1001 IS SUPPLIED BY Q1001 TURNING ON
5V REGULATOR DRIVE CONDITION FEED BACK LINE
IC1001
REG. DRIVE DETECT
DRIVE CONTROL
5V REG DRIVER
REF (1.2V)
ERROR
VCC
2.5V
V. REF GEN 2.5V
OSC
SAWTOOTH
R1011 1800
R1012 1800
REF (1.2V)
ERROR
REG. DRIVE DETECT
DRIVE CONTROL
CAMERA REG DRIVER
REF (1.6V)
94KHz
QR1004, D1008
C1026, R1038
TRANS DRIVE PULSE GENERATOR
DRIVE BIAS (CAMERA 5V)
Q1005
TRANS DRIVER
T1001
CAMERA DRIVE VOLTAGE REGULATOR
TRANSFORMER DRIVE CONDITION FEED BACK LINE
Q1001
Q1002
9V REG
Q1003
9V REG CONTROL
VR1002
REG. 9V
BASE CONTROL FOR Q1001, Q1002 BY REG 5V
Q1006
Q1007
5V REG
VR1001
REG 5V
D1007
5V, 9V
DETECTOR
(SAFETY DEVICE)
RF 5V
Q1009
QR1006
(SAFETY DEVICE)
RF SHUT DOWN
REG 9V
EE Ⓗ
QR1003
EVF 5V
QR1002
REG 5V
CAM PWR ON Ⓛ FROM IC6001-17
Q1004
CAM PWR ON Ⓛ ON
CAM 5V
D1004, L1008
C1030, C1031
RECTIFIRE (16V)
CAM 16V
D1005, L1009
C1032, C1033
RECTIFIRE (9V)
CAM 9V
VR1003
CAM 9V
D1006, L1010
C1034, C1035
RECTIFIRE (−8V)
CAM −8V
R1007 15K
R1008 27K
POWER CONDITION NOMAL : Ⓛ
POWER CONDITION DOROPPED : Ⓗ
IC1005
IC1005
NORMAL 5V
REF (3.2V)
REF (3.2V)
UNREG 10V
R1044 100K
R1045 100K
UNREG 10V
R1048 100K
R1049 47K
CAM PWR ON Ⓛ
+5V
QR1005
CAMERA POWER ON : ON
D1002
CAMERA VOLTAGE DETECTOR
(SAFETY DEVICE)
IC1002
IC1003
(CYLINDER DRIVE VOLTAGE CONTROL)
PLEASE CHECK IF CAP OR CYL MOTOR DOES NOT ROTATE
Q1011
Q1010
(REC/P.B)
10Vp-p
L1004
C1025
LPF
CYL VM
(PREVENTION THE REVERSE CURRENT)
(REC/P.B)
10Vp-p
L1003
C1024
LPF
CAP VM
TO SERVO
SERVO SECTION
IC2601
CYL PWR REG
ERROR TORQUE VOLTAGE
12
ERROR DETECT
3
11
REF (2.5V)
CYL VS
IC2602
16
DET
17
CAP SW
13
14
15
M3
M2
M1
(CAP MOTOR)



RF 5V
Q1009
QR1006
(SAFETY DEVICE)
RF SHUT DOWN
REG 9V
EVF 5V
REG 5V
CAM PWR ON Ⓛ FROM IC6001-17
Q1004
CAM 5V
PWR ON Ⓛ ON
CAM 16V
CAM 9V
CAM -8V
D1002 CAMERA VOLTAGE DETECTOR (SAFETY DEVICE)

3-6. AWT (3) SCHEMATIC DIAGRAM

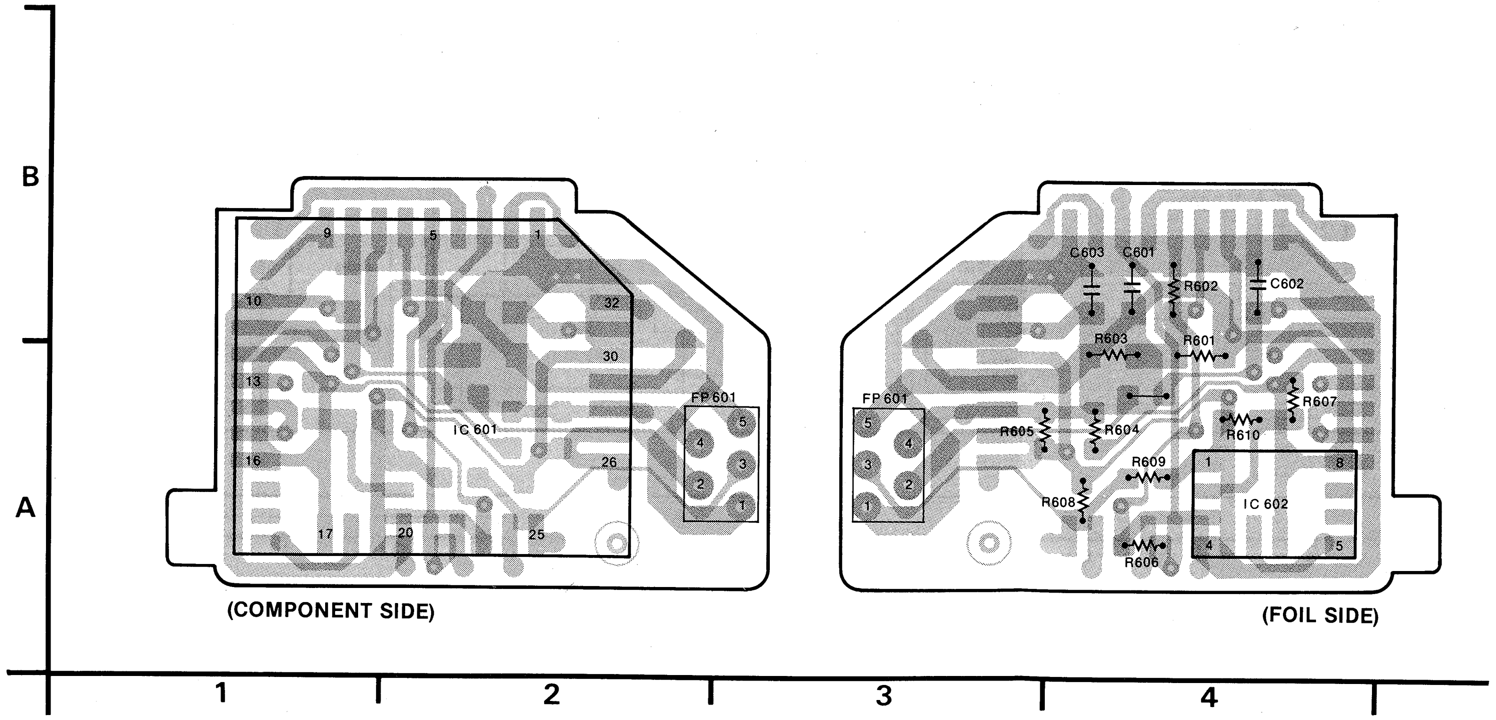


C
B
A
1
2
3
4
5
6
5V
R601 12K (1%)
R603 120K (1%)
C601 0.1
R602 8200 (1%)
IC 601 M51096AU
C602 0.1
C603 0.1
SUBTRACTIVE TEMPERATURE COMPENSATOR
TEMPERATURE COMPENSATOR
SUBTRACTIVE TEMPERATURE COMPENSATOR
R608 1K
R609 2200
R610 10K
R605 1K
R607 10K
R606 10K
R604 2200
IC 602 AN1358S
FP601 (TO PROCESS)
5 5V FP302-1
4 B/G FP302-2
3 R/G FP302-3
2 LOW L Ⓗ FP302-4
1 GND FP302-5
(TO PAGE 3-29)

NOTE: THE MEASUREMENT MODE OF THE DC VOLTAGE ON THIS DIAGRAM IS STOP MODE WITH AIM THE CAMERA AT THE LOGARITHMIC GRAY SCALE CHART.

NOTE: DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING. WHEN YOU ORDER A PART, PLEASE REFER TO PARTS LIST.

3-7. AWT (3) C.B.A. (VEP22083A)



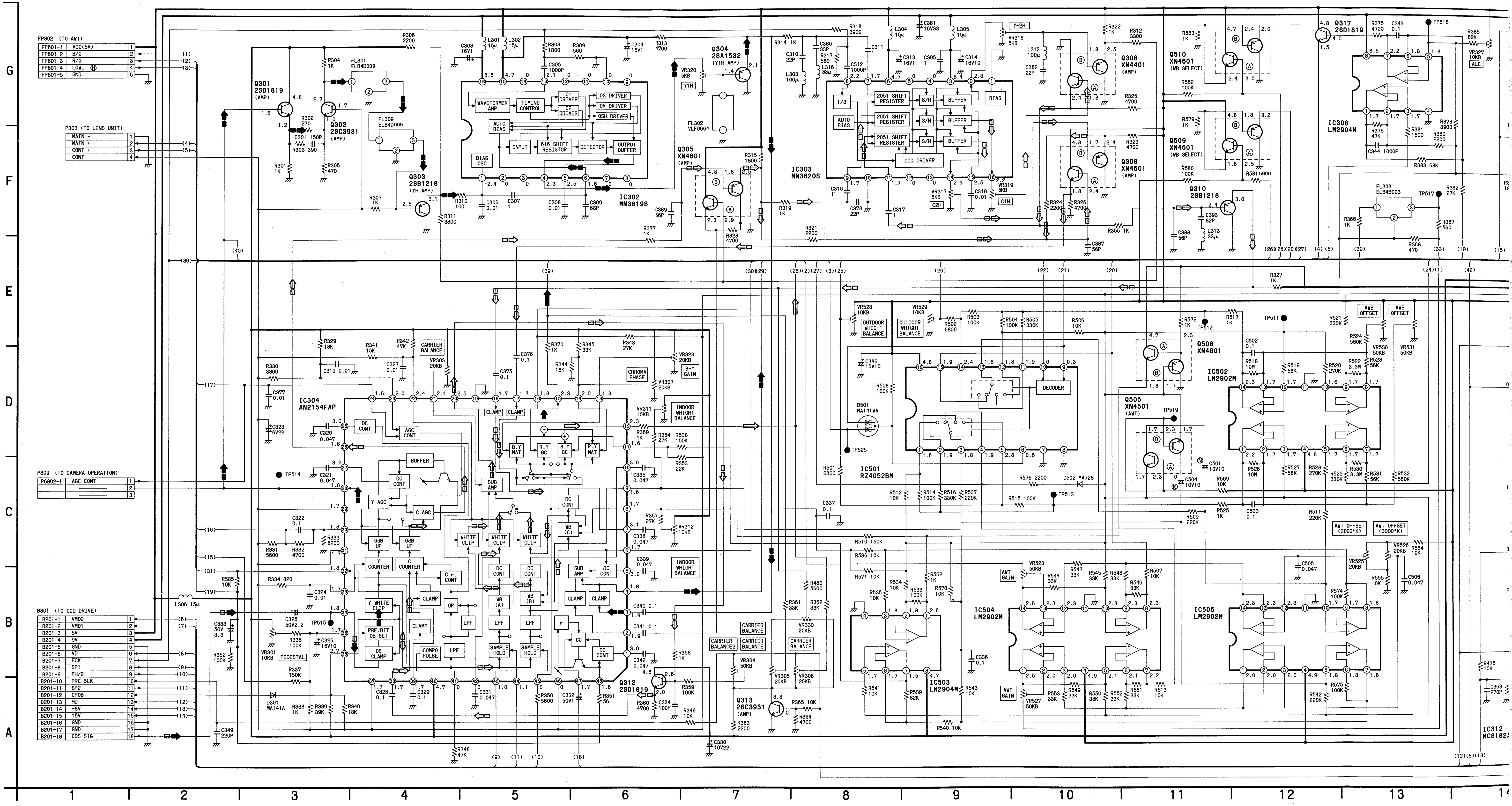
B
A
1
2
3
4
IC 601
FP 601
C603
C601
R602
C602
R603
R601
R607
R605
R604
R610
R609
R608
IC 602
R606
(COMPONENT SIDE)
(FOIL SIDE)

AWT (3) C.B.A.	
Integrated Circuit	
IC601	A-2 Ⓒ
IC602	A-4 Ⓕ
Connector	
FP601	A-2 Ⓒ
FP601	A-3 Ⓕ

ADDRESS INFORMATION
Ⓒ...COMPONENT SIDE
Ⓕ...FOIL SIDE

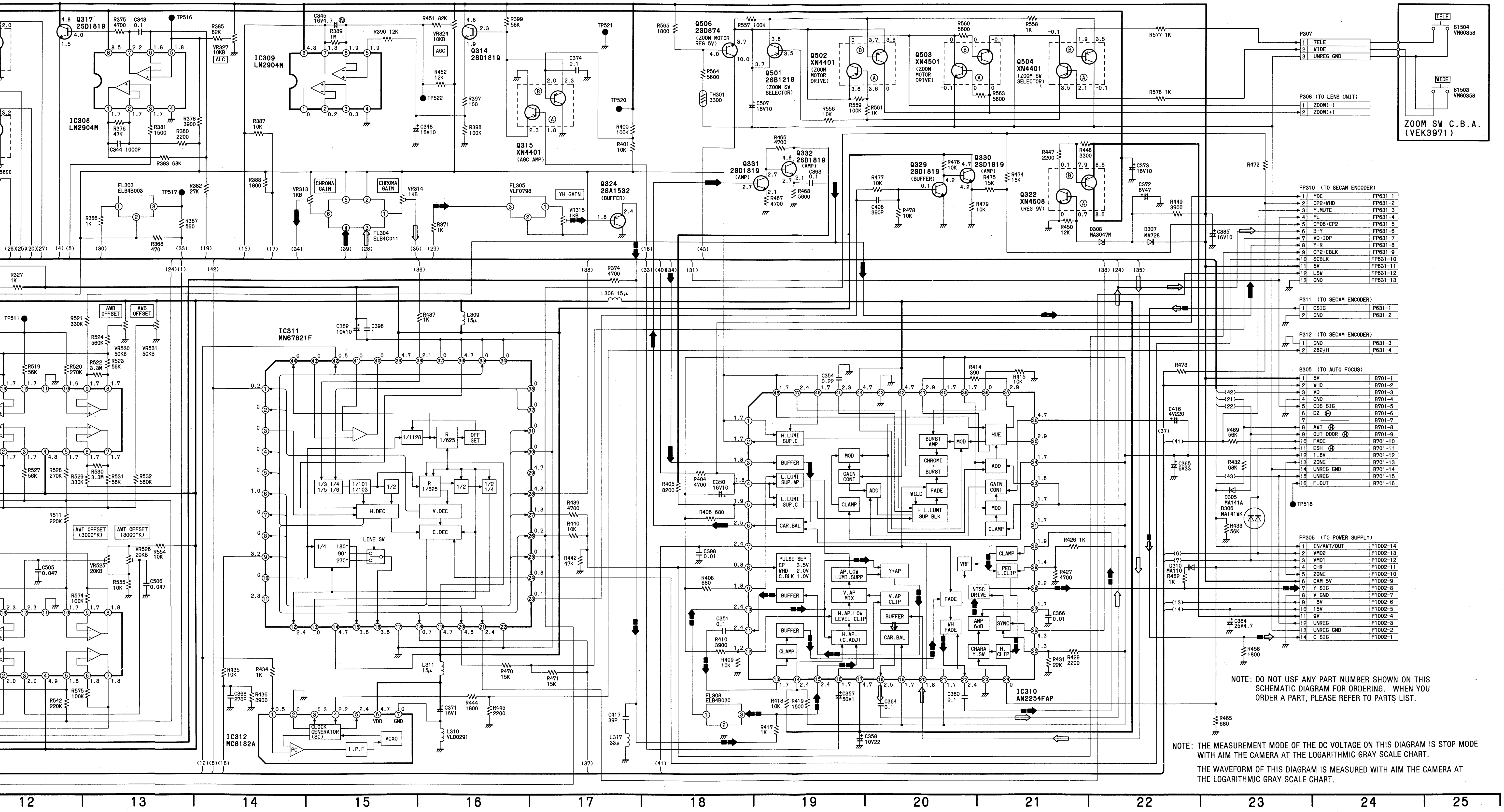
3-8. PROCESS SCHEMATIC DIAGRAM

LUMINANCE SIGNAL
CHROMINANCE SIGNAL
R-Y SIGNAL
PRE VIDEO SIGNAL
B-Y/R-Y COMPOSITE SIGNAL
B-Y SIGNAL



FP302 (TO AWT)
FP601-1 VCC(5V)
FP601-2 B/G
FP601-3 R/G
FP601-4 LOWL.
FP601-5 GND
P303 (TO LENS UNIT)
MAIN -
MAIN +
CONT +
CONT -
P309 (TO CAMERA OPERATION)
P6802-1 AGC CONT
B301 (TO CCD DRIVE)
B201-1 VMD2
B201-2 VMD1
B201-3 5V
B201-4 9V
B201-5 GND
B201-6 VD
B201-7 FCK
B201-8 SP1
B201-9 FH/2
B201-10 PRE BLK
B201-11 SP2
B201-12 CPOB
B201-13 HD
B201-14 -8V
B201-15 15V
B201-16 GND
B201-17 GND
B201-18 COS SIG
Q301 2SD1819 (AMP)
Q302 2SC3931 (AMP)
Q303 2SB1218 (YH AMP)
FL301 ELB4D009
FL309 ELB4D009
IC302 MN3819S
WAVEFORMER AMP
TIMING CONTROL
01 DRIVER
02 DRIVER
OS DRIVER
OR DRIVER
OSH DRIVER
AUTO BIAS
INPUT
616 SHIFT RESISTOR
DETECTOR
OUTPUT BUFFER
BIAS OSC
Q304 2SA1532 (Y1H AMP)
Q305 XN4601 (AMP)
FL302 VLF0664
IC303 MN3820S
1/3
AUTO BIAS
2051 SHIFT RESISTER
S/H
BUFFER
BIAS
CCD DRIVER
Q306 XN4401 (AMP)
Q308 XN4601 (AMP)
Q310 2SB1218
Q510 XN4601 (WB SELECT)
Q509 XN4601 (WB SELECT)
Q317 2SD1819
IC308 LM2904M
FL303 ELB4B003
IC304 AN2154FAP
DC CONT
AGC CONT
BUFFER
Y AGC
C AGC
6dB UP
Y COUNTER
C COUNTER
Y WHITE CLIP
PRE.BIT OB SET
OB CLAMP
COMPO PULSE
CLAMP
WHITE CLIP
SUB AMP
B-Y MAT
R-Y GC
B-Y GC
R-Y MAT
WB (A)
WB (B)
WB (C)
LPF
SAMPLE HOLD
OR
Cr. CONT
GC
CHROMA PHASE
B-Y GAIN
CARRIER BALANCE
CARRIER BALANCE2
INDOOR WHIGHT BALANCE
PEDESTAL
Q312 2SD1819
Q313 2SC3931 (AMP)
D301 MA141A
L306 15μ
OUTDOOR WHIGHT BALANCE
D501 MA141WA
IC501 RZ4052BM
DECODER
D502 MA728
IC503 LM2904M
IC504 LM2902M
AWT GAIN
Q508 XN4601
Q505 XN4501 (AWT)
IC502 LM2902M
IC505 LM2902M
AWB OFFSET
AWT OFFSET (3000°K)
IC312 MC8182
TP512
TP511
TP513
TP514
TP515
TP516
TP517
TP519
TP525
1
2
3
4
5
6
7
8
9
10
11
12
13
A
B
C
D
E
F
G

Back Page:
POWER SUPPLY & AWT (3) Section


Q317 2SD1819
TP516
R375 4700
C343 0.1
R385 82K
VR327 10KB
ALC
IC308 LM2904M
R376 47K
R381 1500
R380 2200
R378 3900
C344 1000P
R383 68K
FL303 ELB4B003
TP517
R382 27K
R366 1K
R367 560
R368 470
C345 16V4.7
R389 1M
R390 12K
IC309 LM2904M
R387 10K
R388 1800
R451 82K
VR324 10KB
AGC
R452 12K
TP522
C348 16V10
Q314 2SD1819
R399 56K
R397 100
R398 100K
C374 0.1
Q315 XN4401 (AGC AMP)
TP521
TP520
R400 100K
R401 10K
VR313 1KB
CHROMA GAIN
VR314 1KB
FL304 ELB4C011
R371 1K
FL305 VLF0798
YH GAIN
VR315 1KB
Q324 2SA1532 (BUFFER)
R565 1800
Q506 2SD874 (ZOOM MOTOR REG 5V)
R557 100K
R564 5600
TH301 3300
Q501 2SB1218 (ZOOM SW SELECTOR)
C507 16V10
Q502 XN4401 (ZOOM MOTOR DRIVE)
R560 5600
Q503 XN4501 (ZOOM MOTOR DRIVE)
R558 1K
Q504 XN4401 (ZOOM SW SELECTOR)
R556 10K
R559 100K
R561 1K
R563 5600
R577 1K
R578 1K
P307
1 TELE
2 WIDE
3 UNREG GND
P308 (TO LENS UNIT)
1 ZOOM(-)
2 ZOOM(+)
TELE
S1504 VMG0358
WIDE
S1503 VMG0358
ZOOM SW C.B.A. (VEK3971)
R466 4700
Q331 2SD1819 (AMP)
Q332 2SD1819 (AMP)
R467 4700
R468 5600
C363 0.1
R477 10K
C406 390P
R478 10K
Q329 2SD1819 (BUFFER)
R476 10K
Q330 2SD1819 (AMP)
R475 15K
R479 10K
R474 15K
R447 2200
R448 3300
Q322 XN4608 (REG 9V)
R450 12K
C373 16V10
C372 6V47
R449 3900
D308 MA3047M
D307 MA728
R472
C385 16V10
FP310 (TO SECAM ENCODER)
1 YDC FP631-1
2 CP2+WHD FP631-2
3 Y.MUTE FP631-3
4 YL FP631-4
5 CP08+CP2 FP631-5
6 B-Y FP631-6
7 VD+IDP FP631-7
8 Y-R FP631-8
9 CP2+CBLK FP631-9
10 SCBLK FP631-10
11 5V FP631-11
12 LSW FP631-12
13 GND FP631-13
P311 (TO SECAM ENCODER)
1 CSIG P631-1
2 GND P631-2
P312 (TO SECAM ENCODER)
1 GND P631-3
2 282fH P631-4
B305 (TO AUTO FOCUS)
1 5V B701-1
2 WHD B701-2
3 VD B701-3
4 GND B701-4
5 CDS SIG B701-5
6 DZ B701-6
7 B701-7
8 AWT B701-8
9 OUT DOOR B701-9
10 FADE B701-10
11 ESH B701-11
12 1.8V B701-12
13 ZONE B701-13
14 UNREG GND B701-14
15 UNREG B701-15
16 F.OUT B701-16
TP518
FP306 (TO POWER SUPPLY)
1 IN/AWT/OUT P1002-14
2 VMD2 P1002-13
3 VMD1 P1002-12
4 CHR P1002-11
5 ZONE P1002-10
6 CAM 5V P1002-9
7 Y SIG P1002-8
8 V GND P1002-7
9 -8V P1002-6
10 15V P1002-5
11 9V P1002-4
12 UNREG P1002-3
13 UNREG GND P1002-2
14 C SIG P1002-1
R327 1K
TP511
R521 330K
AWB OFFSET
R524 560K
VR530 50KB
VR531 50KB
R522 3.3M
R523 56K
R519 56K
R520 270K
R527 56K
R528 270K
R529 330K
R530 3.3M
R531 56K
R532 560K
R511 220K
AWT OFFSET (3000°K)
VR525 20KB
VR526 20KB
R554 10K
C505 0.047
R555 10K
C506 0.047
R574 100K
R575 100K
R542 220K
IC311 MN67621F
C369 10V10
C396 1
R437 1K
L309 15μ
1/1128
R 1/625
OFF SET
1/3 1/4 1/5 1/6
1/101 1/103
1/2
R 1/625
1/2
1/2 1/4
H.DEC
V.DEC
C.DEC
1/4
180° 90° 270°
LINE SW
R374 4700
L308 15μ
R439 4700
R440 10K
R442 47K
R435 10K
R434 1K
C368 270P
R436 3900
IC312 MC8182A
CLOCK GENERATOR (SC)
VCXO
PC
L.P.F
VDD
GND
L311 15μ
R470 15K
R471 15K
R444 1800
R445 2200
C371 16V1
L310 VLD0291
C417 39P
L317 33μ
R405 8200
R404 4700
C350 16V10
R406 680
C398 0.01
R408 680
C351 0.1
R410 3900
R409 10K
FL308 ELB4B030
R418 10K
R419 1500
R417 1K
C357 50V1
C358 10V22
C364 0.1
C360 0.1
C354 0.22
R414 390
R415 10K
H.LUMI SUP.C
BUFFER
L.LUMI SUP.AP
L.LUMI SUP.C
CAR.BAL
PULSE SEP CP 3.5V WHD 2.0V C.BLK 1.0V
BUFFER
BUFFER
CLAMP
MOD
GAIN CONT
CLAMP
ADD
BURST AMP
MOD
CHROMI + BURST
WILD
FADE
H L.LUMI SUP BLK
HUE
ADD
GAIN CONT
MOD
CLAMP
AP.LOW LUMI.SUPP
Y+AP
V.AP MIX
V.AP CLIP
H.AP.LOW LEVEL CLIP
H.AP. (G.ADJ)
BUFFER
CAR.BAL
FADE
WH FADE
VRF
CLAMP
PED L.CLIP
NTSC DRIVE
AMP 6dB
SYNC
CHARA Y.SW
H. CLIP
IC310 AN2254FAP
R426 1K
R427 4700
C366 0.01
R431 22K
R429 2200
R473
C416 4V220
R469 56K
R432 68K
C365 6V33
D305 MA141A
D306 MA141WK
R433 56K
D310 MA110
R462 1K
C384 25V4.7
R458 1800
R465 680
12
13
14
15
16
17
18
19
20
21
22
23
24
25

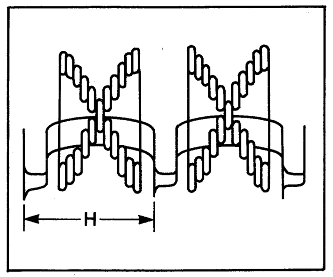
NOTE: DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING. WHEN YOU ORDER A PART, PLEASE REFER TO PARTS LIST.

NOTE: THE MEASUREMENT MODE OF THE DC VOLTAGE ON THIS DIAGRAM IS STOP MODE WITH AIM THE CAMERA AT THE LOGARITHMIC GRAY SCALE CHART.

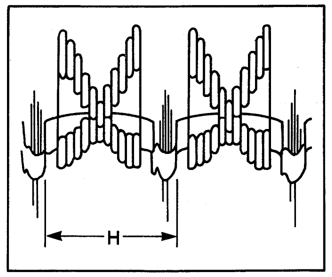
THE WAVEFORM OF THIS DIAGRAM IS MEASURED WITH AIM THE CAMERA AT THE LOGARITHMIC GRAY SCALE CHART.

3-9. PROCESS C.B.A. (VEP23102A)

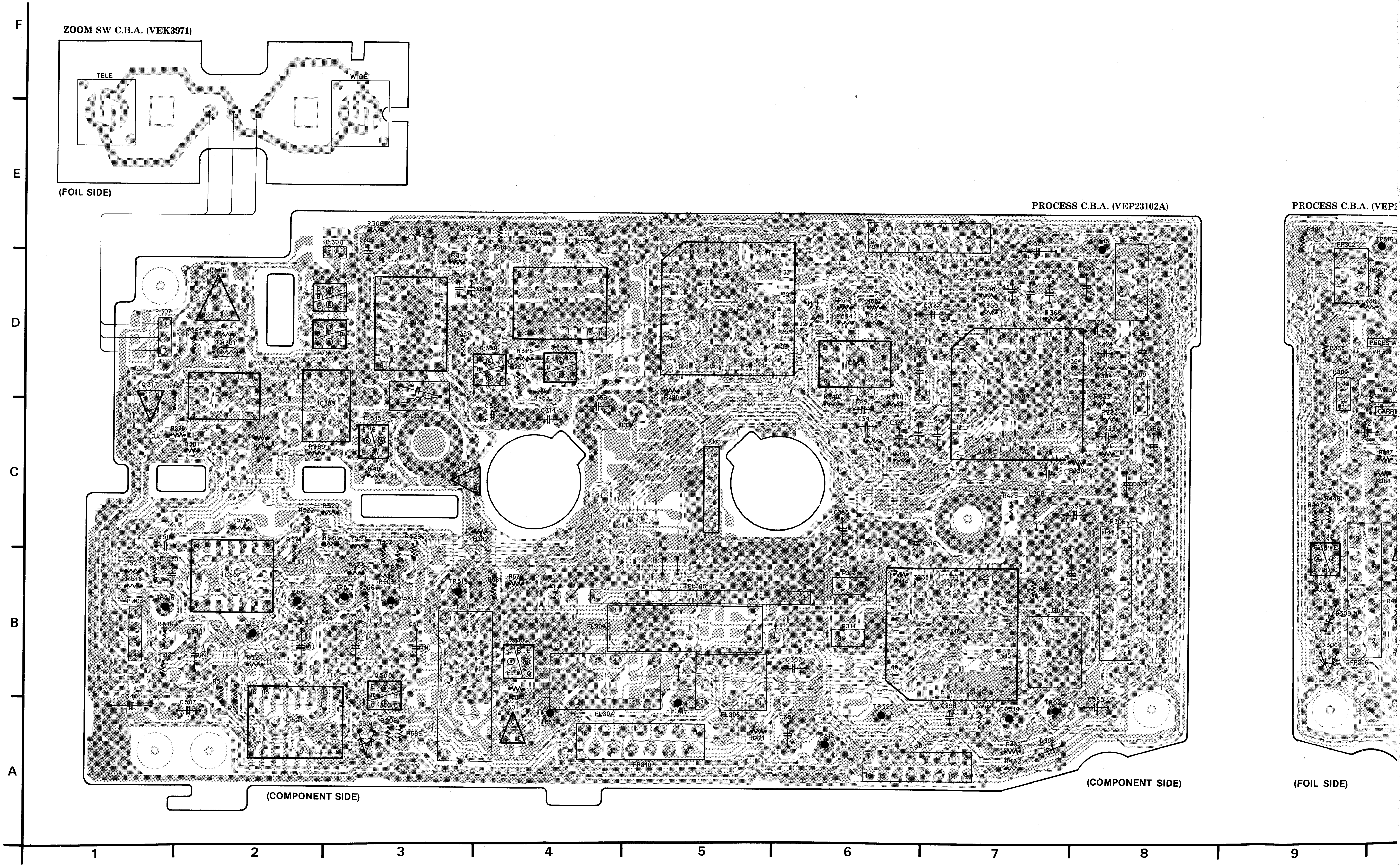
PROCESS CIRCUIT TP (Test Point) WAVEFORM (REF. NO. 500 Series)



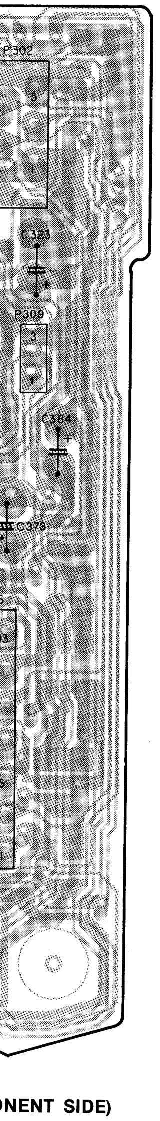
TP514 STOP
0.1V/20μsec. div. 0.36Vp-p



TP515 STOP
0.1V/20μsec. div. 0.5Vp-p

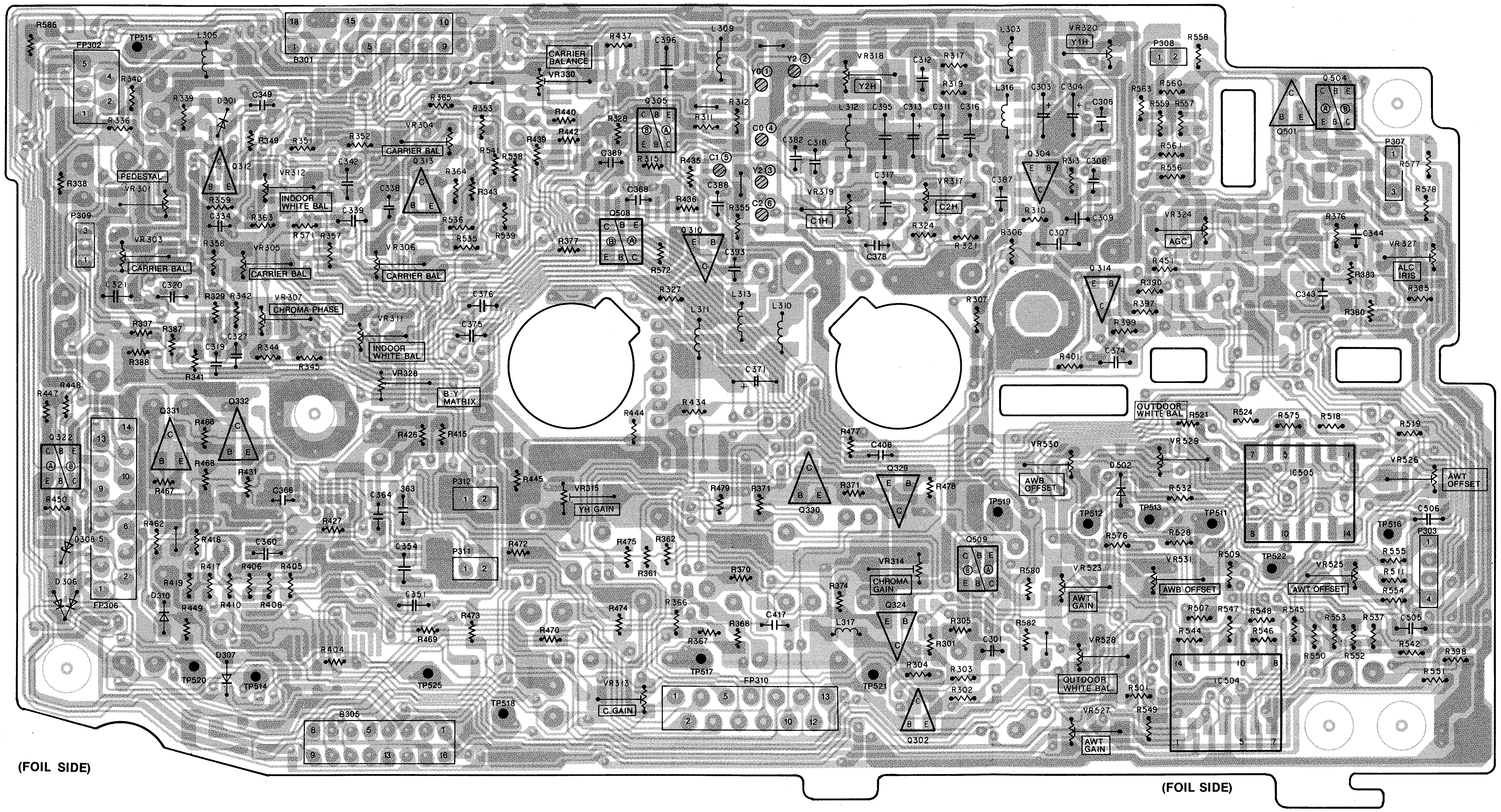

ZOOM SW C.B.A. (VEK3971)
TELE
WIDE
(FOIL SIDE)
PROCESS C.B.A. (VEP23102A)
(COMPONENT SIDE)
PROCESS C.B.A. (VEP2
(FOIL SIDE)
IC302
IC303
IC311
IC503
IC304
IC308
IC309
IC312
IC502
IC501
IC310
FL302
FL301
FL305
FL309
FL304
FL303
FL306
FP302
FP306
FP310
P307
P308
P301
P303
P305
P309
P311
P312
TP511
TP512
TP513
TP514
TP515
TP516
TP517
TP518
TP519
TP520
TP521
TP522
TP525
F
E
D
C
B
A
1
2
3
4
5
6
7
8
9

VEP23102A)



ONENT SIDE)

PROCESS C.B.A. (VEP23102A)


CARRIER BALANCE
VR330
PEDESTAL
VR301
CARRIER BAL
VR304
VR312
INDOOR WHITE BAL
VR303
CARRIER BAL
VR305
CARRIER BAL
VR306
VR307
CHROMA PHASE
VR311
INDOOR WHITE BAL
VR328
B-Y MATRIX
VR315
YH GAIN
VR318
Y2H
Y2H
VR319
C1H
VR317
C2H
VR320
Y1H
VR324
AGC
VR327
ALC IRIS
OUTDOOR WHITE BAL
VR530
AWB OFFSET
VR526
AWT OFFSET
VR314
CHROMA GAIN
VR523
AWT GAIN
VR531
AWB OFFSET
VR525
AWT OFFSET
VR528
OUTDOOR WHITE BAL
VR527
AWT GAIN
VR313
C.GAIN
IC504
IC505
B301
B305
FP302
FP306
FP310
P303
P307
P308
P309
P311
P312

(FOIL SIDE)

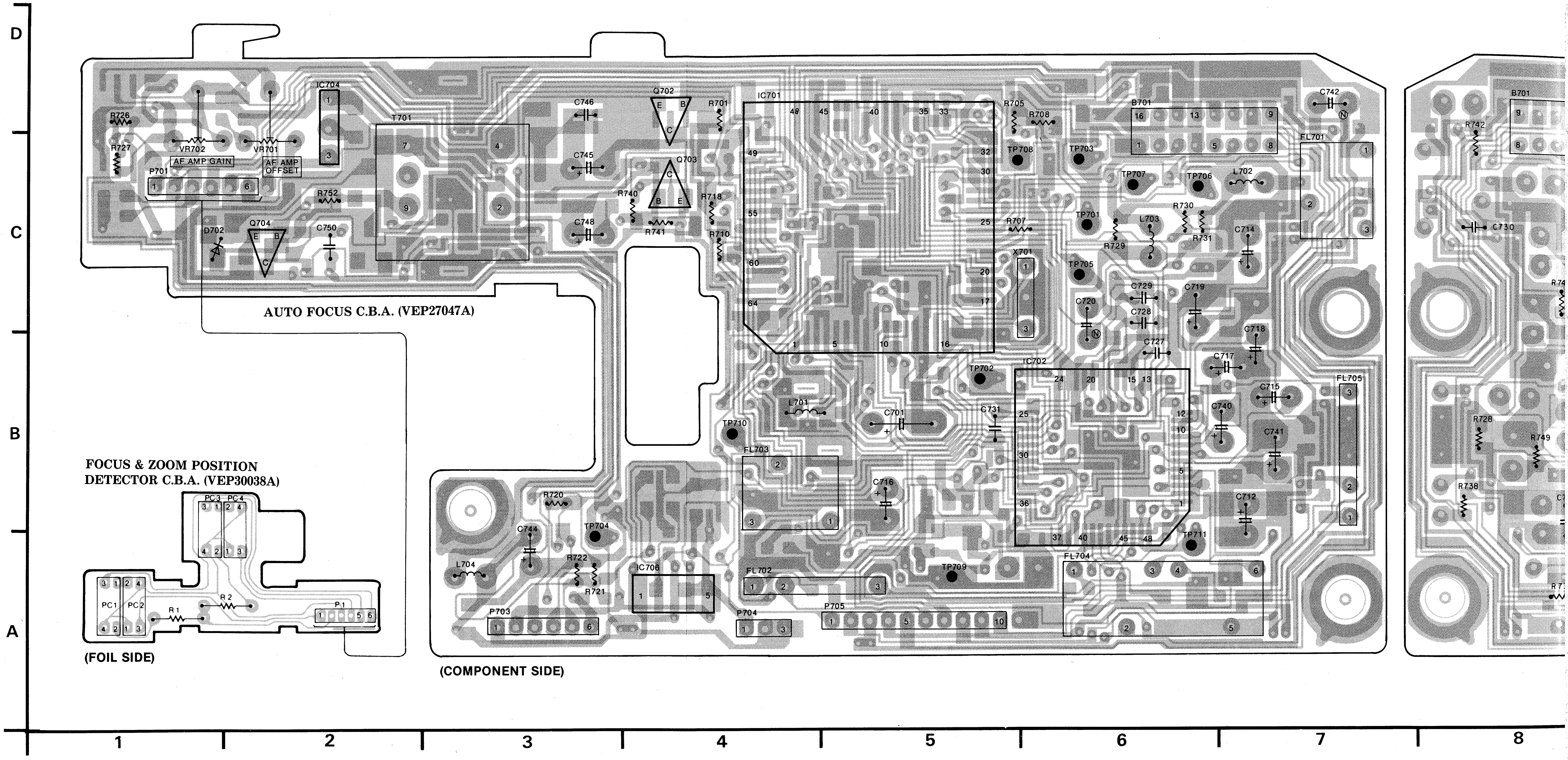
(FOIL SIDE)

8 9 10 11 12 13 14 15 16

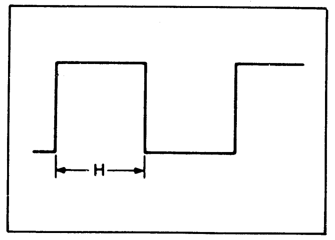
PROCESS C.B.A.			
Transistor		TP519	B-3 Ⓒ
Q301	A-4 Ⓒ	TP519	B-14 Ⓕ
Q302	A-14 Ⓕ	TP520	A-7 Ⓒ
Q303	C-3 Ⓒ	TP520	A-10 Ⓕ
Q304	D-14 Ⓕ	TP521	A-4 Ⓒ
Q305	D-12 Ⓕ	TP521	A-13 Ⓕ
Q306	D-4 Ⓒ	TP522	B-2 Ⓒ
Q308	D-4 Ⓒ	TP522	B-15 Ⓕ
Q310	D-12 Ⓕ	TP525	A-6 Ⓒ
Q312	D-10 Ⓕ	TP525	A-11 Ⓕ
Q313	D-11 Ⓕ	**Adjustment**	
Q314	C-14 Ⓕ	VR301	D-10 Ⓕ
Q315	C-3 Ⓒ	VR303	D-10 Ⓕ
Q317	D-1 Ⓒ	VR304	D-11 Ⓕ
Q320	B-10 Ⓕ	VR305	C-10 Ⓕ
Q322	C-9 Ⓕ	VR306	C-11 Ⓕ
Q324	A-14 Ⓕ	VR307	C-10 Ⓕ
Q329	B-13 Ⓕ	VR311	C-11 Ⓕ
Q330	B-13 Ⓕ	VR312	D-10 Ⓕ
Q331	C-10 Ⓕ	VR313	A-12 Ⓕ
Q332	C-10 Ⓕ	VR314	B-13 Ⓕ
Q501	D-15 Ⓕ	VR315	B-12 Ⓕ
Q502	D-3 Ⓒ	VR317	D-14 Ⓕ
Q503	D-3 Ⓒ	VR318	D-13 Ⓕ
Q504	D-16 Ⓕ	VR319	D-13 Ⓕ
Q505	B-3 Ⓒ	VR320	E-14 Ⓕ
Q506	D-2 Ⓒ	VR324	D-15 Ⓕ
Q508	D-12 Ⓕ	VR327	D-16 Ⓕ
Q509	B-14 Ⓕ	VR328	C-11 Ⓕ
Q510	B-4 Ⓒ	VR330	D-12 Ⓕ
Integrated Circuit		VR523	B-14 Ⓕ
IC302	D-3 Ⓒ	VR525	B-16 Ⓕ
IC303	D-4 Ⓒ	VR526	B-16 Ⓕ
IC304	C-7 Ⓒ	VR527	A-14 Ⓕ
IC308	D-2 Ⓒ	VR528	B-14 Ⓕ
IC309	C-3 Ⓒ	VR529	B-15 Ⓕ
IC310	B-7 Ⓒ	VR530	B-14 Ⓕ
IC311	D-5 Ⓒ	VR531	B-15 Ⓕ
IC312	C-5 Ⓒ	**Connector**	
IC501	A-2 Ⓒ	B301	D-7 Ⓒ
IC502	B-2 Ⓒ	B301	D-10 Ⓕ
IC503	D-6 Ⓒ	B305	A-6 Ⓒ
IC504	A-15 Ⓕ	B305	A-11 Ⓕ
IC505	B-15 Ⓕ	FP302	E-8 Ⓒ
Test Point		FP302	D-9 Ⓕ
TP511	B-2 Ⓒ	FP306	C-8 Ⓒ
TP511	B-15 Ⓕ	FP306	B-9 Ⓕ
TP512	B-3 Ⓒ	FP310	A-5 Ⓒ
TP512	B-14 Ⓕ	FP310	A-13 Ⓕ
TP513	B-3 Ⓒ	P307	D-1 Ⓒ
TP513	B-15 Ⓕ	P307	D-16 Ⓕ
TP514	A-7 Ⓒ	P308	E-3 Ⓒ
TP514	A-10 Ⓕ	P308	E-15 Ⓕ
TP515	E-8 Ⓒ	P309	D-8 Ⓒ
TP515	E-10 Ⓕ	P309	D-9 Ⓕ
TP516	B-1 Ⓒ	P303	B-1 Ⓒ
TP516	B-16 Ⓕ	P303	B-16 Ⓕ
TP517	A-5 Ⓒ	P311	B-6 Ⓒ
TP517	A-12 Ⓕ	P311	B-11 Ⓕ
TP518	A-6 Ⓒ	P312	B-6 Ⓒ
TP518	A-11 Ⓕ	P312	B-11 Ⓕ

ADDRESS INFORMATION
Ⓒ...COMPONENT SIDE
Ⓕ...FOIL SIDE

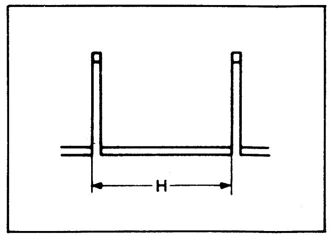
3-10. AUTO FOCUS C.B.A. (VEP27047A)


D
C
B
A
1
2
3
4
5
6
7
8
AUTO FOCUS C.B.A. (VEP27047A)
FOCUS & ZOOM POSITION DETECTOR C.B.A. (VEP30038A)
(FOIL SIDE)
(COMPONENT SIDE)
R726
R727
VR702
AF AMP GAIN
VR701
AF AMP OFFSET
P701
IC704
T701
D702
Q704
C750
R752
C746
C745
C748
Q702
Q703
R740
R741
R701
R718
R710
IC701
R705
R708
TP708
TP703
TP707
TP706
TP701
TP705
TP702
TP704
TP709
TP710
TP711
R707
X701
B701
C742
FL701
L702
R730
R731
R729
L703
C714
C729
C728
C720
C719
C727
C718
C717
C715
C740
C741
C712
IC702
C731
C701
L701
FL703
C716
FL705
FL704
FL702
IC706
R720
C744
L704
R722
R721
P703
P704
P705
PC3
PC4
PC1
PC2
R1
R2
P1
R742
C730
R728
R749
R738

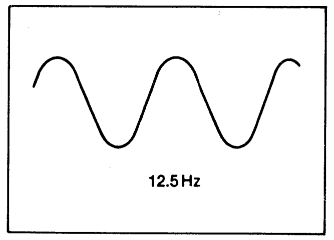
AUTO FOCUS CIRCUIT TP (Test Point) WAVEFORM (REF. NO. 700 Series)



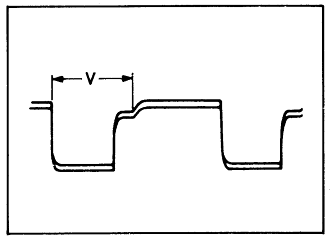
TP702 STOP
2.0V/20μsec. div. 4.5Vp-p



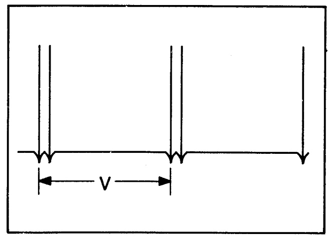
TP703 STOP
2.0V/20μsec. div. 5.0Vp-p



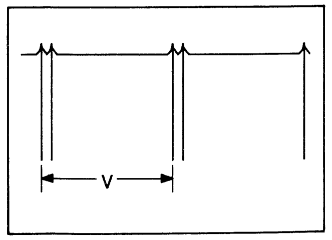
TP704 STOP
10.0V/20msec. div. 38Vp-p



TP705 STOP
0.5V/5msec. div. 1.3Vp-p

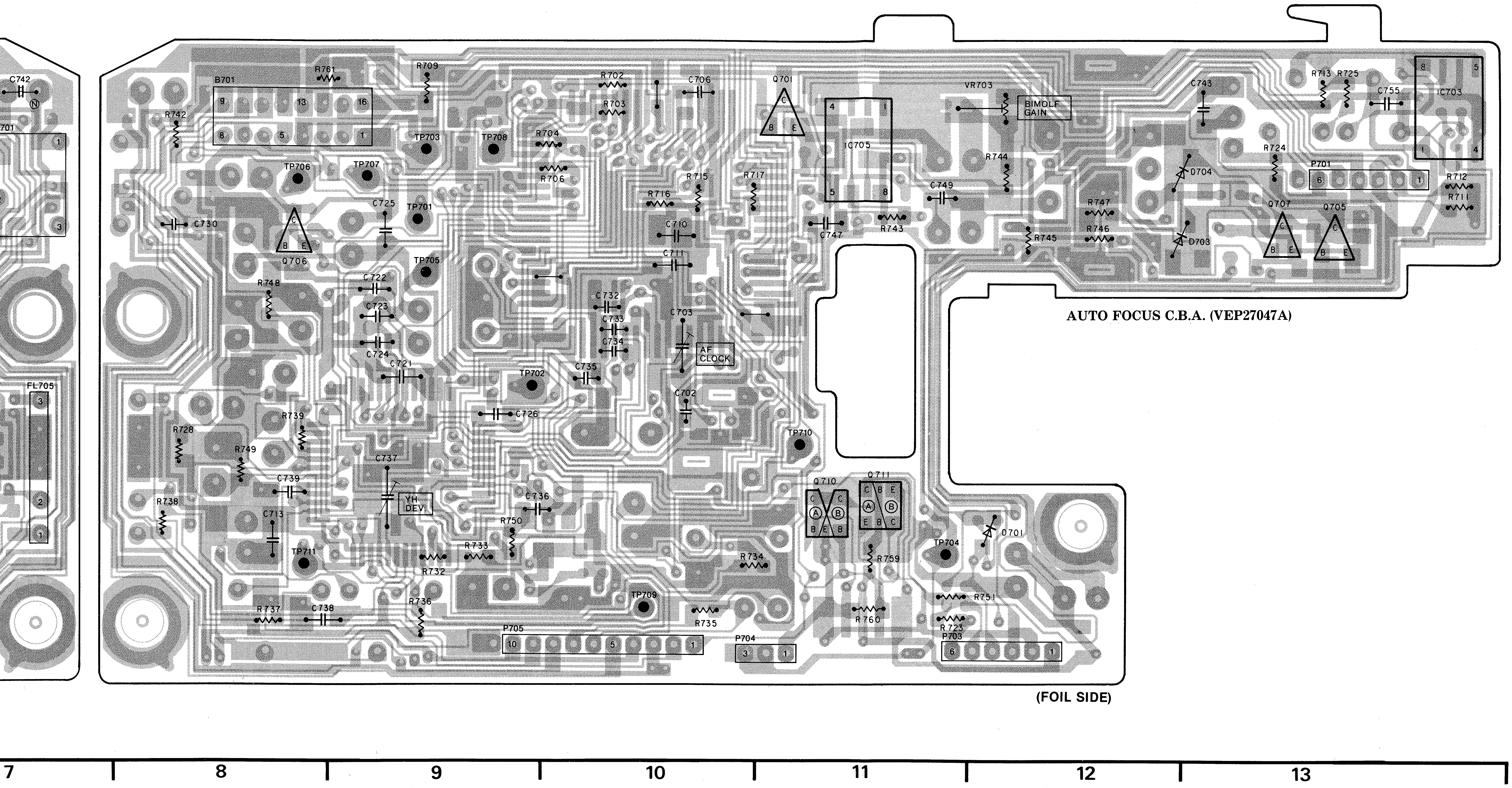


TP707 STOP
2.0V/10msec. div. 5.0Vp-p



TP708 STOP
2.0V/10msec. div. 5.0Vp-p

Back Page:
PROCESS Section

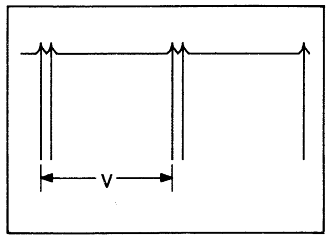

C742
701
B701
9
13
16
8
5
1
R761
R709
R702
R703
C706
Q701
VR703
BIMOLF GAIN
C743
R713
R725
C755
IC703
R742
TP703
TP708
R704
R706
TP706
TP707
R715
R716
R717
IC705
R744
C749
R724
P701
D704
R712
R711
C725
TP701
C730
Q706
C710
C711
C747
R743
R745
R747
R746
D703
Q707
Q705
TP705
R748
C722
C723
C732
C733
C734
C703
AF CLOCK
C724
C721
TP702
C735
FL705
C702
C726
R728
R739
R749
TP710
C737
C739
R738
C713
YH DEV
C736
Q710
Q711
R750
D701
TP704
R733
R732
TP711
R734
R759
R751
R723
R760
R736
R737
C738
TP709
R735
P705
P704
P703
7
8
9
10
11
12
13

AUTO FOCUS C.B.A. (VEP27047A)

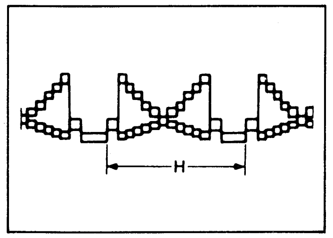
(FOIL SIDE)

AUTO FOCUS C.B.A.	
Transistor	
Q701	D-11 Ⓕ
Q702	D-4 Ⓒ
Q703	C-4 Ⓒ
Q704	C-2 Ⓒ
Q705	C-13 Ⓕ
Q706	C-8 Ⓕ
Q707	C-13 Ⓕ
Q710	B-11 Ⓕ
Q711	B-11 Ⓕ
Integrated Circuit	
IC701	D-4 Ⓒ
IC702	B-6 Ⓒ
IC703	D-13 Ⓕ
IC704	D-2 Ⓒ
IC705	C-11 Ⓕ
IC706	A-4 Ⓒ
Test Point	
TP701	C-6 Ⓒ
TP701	C-9 Ⓕ
TP702	B-5 Ⓒ
TP702	B-9 Ⓕ
TP703	C-6 Ⓒ
TP703	C-9 Ⓕ
TP704	B-3 Ⓒ
TP704	B-11 Ⓕ
TP705	C-6 Ⓒ
TP705	C-9 Ⓕ
TP706	C-6 Ⓒ
TP706	C-8 Ⓕ
TP707	C-6 Ⓒ
TP707	C-9 Ⓕ
TP708	C-5 Ⓒ
TP708	C-9 Ⓕ
TP709	A-5 Ⓒ
TP709	A-10 Ⓕ
TP710	B-4 Ⓒ
TP710	B-11 Ⓕ
TP711	A-6 Ⓒ
TP711	A-8 Ⓕ
Adjustment	
VR701	C-2 Ⓒ
VR702	C-1 Ⓒ
VR703	D-11 Ⓕ
C703	C-10 Ⓕ
C737	B-9 Ⓕ
Connector	
B701	D-6 Ⓒ
B701	D-8 Ⓕ
P1	A-2 Ⓕ
P701	C-1 Ⓒ
P701	C-13 Ⓕ
P703	A-3 Ⓒ
P703	A-11 Ⓕ
P704	A-4 Ⓒ
P704	A-10 Ⓕ
P705	A-5 Ⓒ
P705	A-9 Ⓕ

ADDRESS INFORMATION
Ⓒ...COMPONENT SIDE
Ⓕ...FOIL SIDE

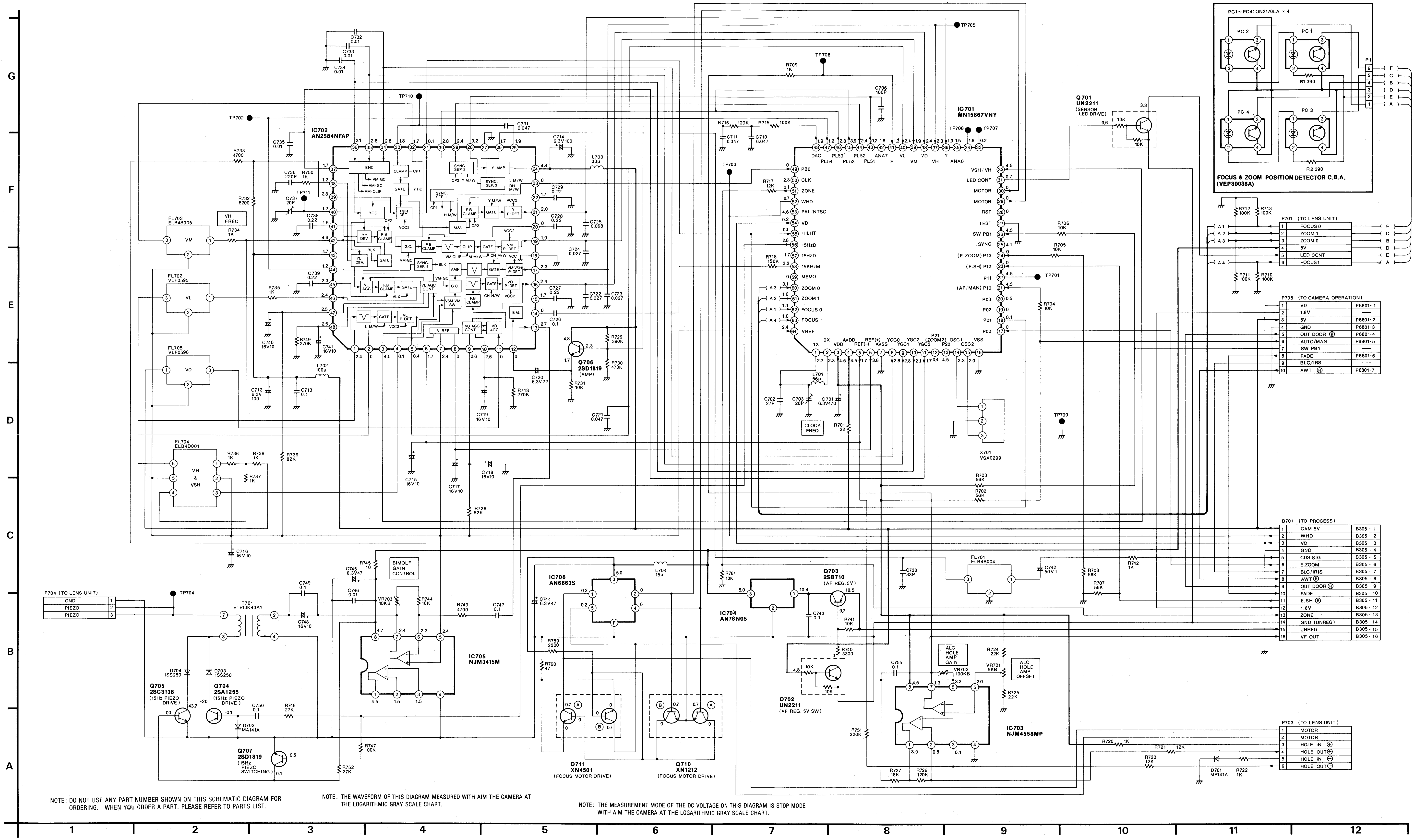


TP708 STOP
2.0V/10msec. div. 5.0Vp-p



TP710 STOP
0.1V/20μsec. div. 0.3Vp-p
TP711 STOP
0.2V/20μsec. div. 0.6Vp-p

3-11. AUTO FOCUS SCHEMATIC DIAGRAM

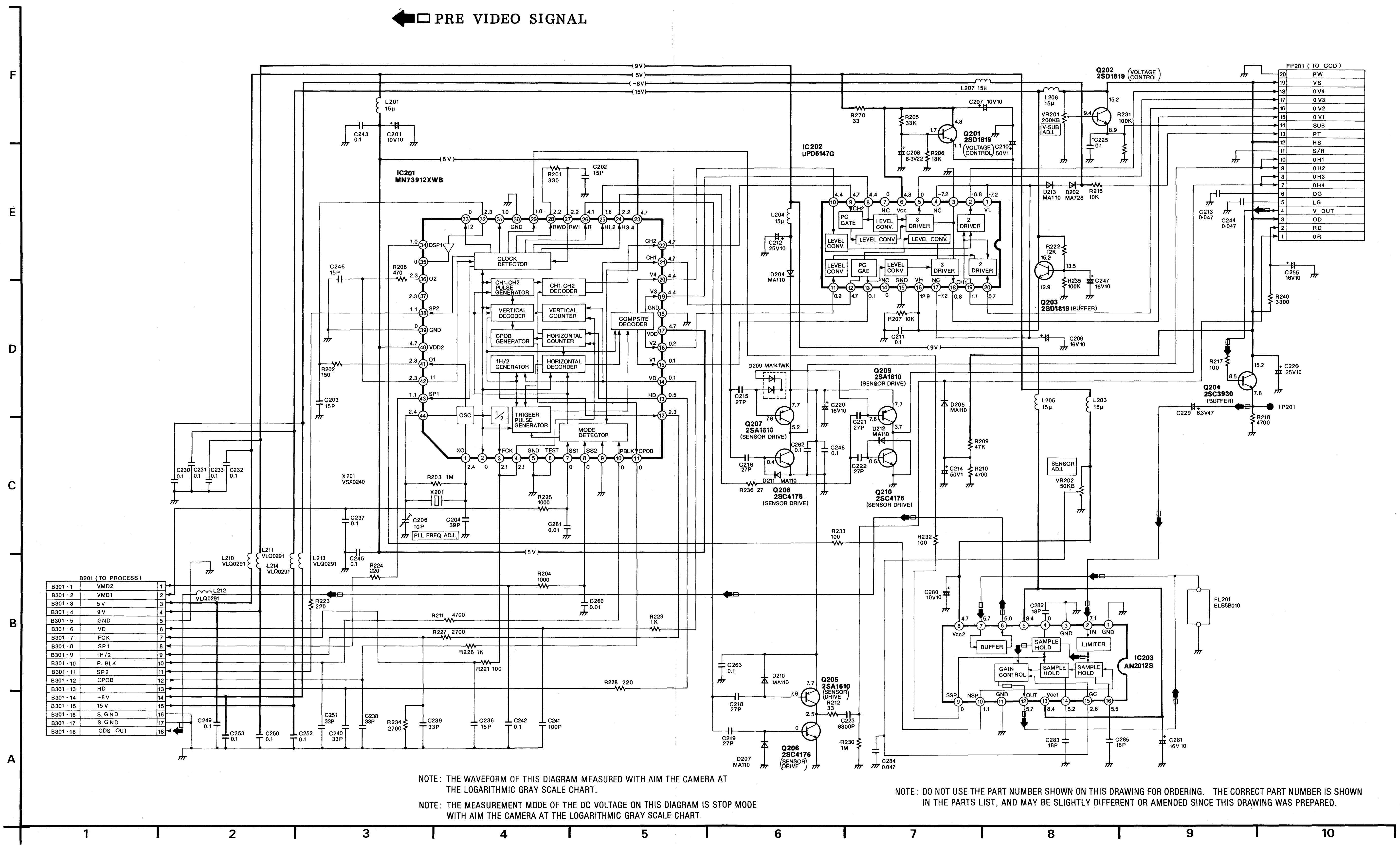

IC702 AN2584NFAP
IC701 MN15867VNY
IC703 NJM4558MP
IC704 AN78N05
IC705 NJM3415M
IC706 AN6663S
Q701 UN2211 (SENSOR LED DRIVE)
Q702 UN2211 (AF REG. 5V SW)
Q703 2SB710 (AF REG. 5V)
Q704 2SA1255 (15Hz PIEZO DRIVE)
Q705 2SC3138 (15Hz PIEZO DRIVE)
Q706 2SD1819 (AMP)
Q707 2SD1819 (15Hz PIEZO SWITCHING)
Q710 XN1212 (FOCUS MOTOR DRIVE)
Q711 XN4501 (FOCUS MOTOR DRIVE)
FL701 ELB4B004
FL702 VLF0595
FL703 ELB4B005
FL704 ELB4D001
FL705 VLF0596
T701 ETE13K43AY
X701 VSX0299
BIMOLF GAIN CONTROL
ALC HOLE AMP GAIN
ALC HOLE AMP OFFSET
CLOCK FREQ.
VH FREQ.
PC1~PC4: ON2170LA × 4
FOCUS & ZOOM POSITION DETECTOR C.B.A. (VEP30038A)
P704 (TO LENS UNIT)
1 GND
2 PIEZO
3 PIEZO
P701 (TO LENS UNIT)
1 FOCUS 0 F
2 ZOOM 1 C
3 ZOOM 0 B
4 5V D
5 LED CONT E
6 FOCUS1 A
P705 (TO CAMERA OPERATION)
1 VD P6801-1
2 1.8V —
3 5V P6801-2
4 GND P6801-3
5 OUT DOOR Ⓗ P6801-4
6 AUTO/MAN P6801-5
7 SW PB1 —
8 FADE P6801-6
9 BLC/IRS —
10 AWT Ⓗ P6801-7
B701 (TO PROCESS)
1 CAM 5V B305-1
2 WHD B305-2
3 VD B305-3
4 GND B305-4
5 CDS SIG B305-5
6 E.ZOOM B305-6
7 BLC/IRIS B305-7
8 AWT Ⓗ B305-8
9 OUT DOOR Ⓗ B305-9
10 FADE B305-10
11 E.SH Ⓗ B305-11
12 1.8V B305-12
13 ZONE B305-13
14 GND (UNREG) B305-14
15 UNREG B305-15
16 VF OUT B305-16
P703 (TO LENS UNIT)
1 MOTOR
2 MOTOR
3 HOLE IN ⊕
4 HOLE OUT⊕
5 HOLE IN ⊖
6 HOLE OUT⊖
A B C D E F G
1 2 3 4 5 6 7 8 9 10 11 12

NOTE: DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING. WHEN YOU ORDER A PART, PLEASE REFER TO PARTS LIST.

NOTE: THE WAVEFORM OF THIS DIAGRAM MEASURED WITH AIM THE CAMERA AT THE LOGARITHMIC GRAY SCALE CHART.

NOTE: THE MEASUREMENT MODE OF THE DC VOLTAGE ON THIS DIAGRAM IS STOP MODE WITH AIM THE CAMERA AT THE LOGARITHMIC GRAY SCALE CHART.

3-12. CCD DRIVE SCHEMATIC DIAGRAM


PRE VIDEO SIGNAL
IC201 MN73912XWB
CLOCK DETECTOR
CH1,CH2 PULSE GENERATOR
CH1,CH2 DECODER
VERTICAL DECODER
VERTICAL COUNTER
CPOB GENERATOR
HORIZONTAL COUNTER
fH/2 GENERATOR
HORIZONTAL DECORDER
COMPSITE DECODER
OSC
1/2
TRIGEER PULSE GENERATOR
MODE DETECTOR
DSP1
O2
SP2
GND
VDD2
O1
SP1
XO
FCK
TEST
SS1
SS2
PBLK
CPOB
RWO
RWI
R
H1.2
H3.4
CH2
CH1
V4
V3
VDD
V2
V1
VD
HD
IC202 µPD6147G
PG GATE
LEVEL CONV.
3 DRIVER
2 DRIVER
PG GAE
NC
Vcc
VH
VL
Q201 2SD1819 (VOLTAGE CONTROL)
Q202 2SD1819 (VOLTAGE CONTROL)
Q203 2SD1819 (BUFFER)
Q204 2SC3930 (BUFFER)
Q205 2SA1610 (SENSOR DRIVE)
Q206 2SC4176 (SENSOR DRIVE)
Q207 2SA1610 (SENSOR DRIVE)
Q208 2SC4176 (SENSOR DRIVE)
Q209 2SA1610 (SENSOR DRIVE)
Q210 2SC4176 (SENSOR DRIVE)
IC203 AN2012S
BUFFER
SAMPLE HOLD
LIMITER
GAIN CONTROL
Vcc2
SSP
NSP
OUT
Vcc1
GC
IN
VR201 200KB V-SUB ADJ.
VR202 50KB SENSOR ADJ.
PLL FREQ. ADJ.
X201 VSX0240
FL201 ELB5B010
TP201
D209 MA141WK
D202 MA728
D213 MA110
D204 MA110
D205 MA110
D207 MA110
D210 MA110
D211 MA110
D212 MA110
L201 15µ
L202 15µ
L203 15µ
L204 15µ
L205 15µ
L206 15µ
L207 15µ
L210 VLQ0291
L211 VLQ0291
L212 VLQ0291
L213 VLQ0291
L214 VLQ0291
(9V)
(5V)
(-8V)
(15V)
B201 (TO PROCESS)
B301-1 VMD2 1
B301-2 VMD1 2
B301-3 5V 3
B301-4 9V 4
B301-5 GND 5
B301-6 VD 6
B301-7 FCK 7
B301-8 SP1 8
B301-9 1H/2 9
B301-10 P. BLK 10
B301-11 SP2 11
B301-12 CPOB 12
B301-13 HD 13
B301-14 -8V 14
B301-15 15V 15
B301-16 S.GND 16
B301-17 S.GND 17
B301-18 CDS OUT 18
FP201 (TO CCD)
20 PW
19 VS
18 0V4
17 0V3
16 0V2
15 0V1
14 SUB
13 PT
12 HS
11 S/R
10 0H1
9 0H2
8 0H3
7 0H4
6 OG
5 LG
4 V OUT
3 OD
2 RD
1 OR
F
E
D
C
B
A
1
2
3
4
5
6
7
8
9
10

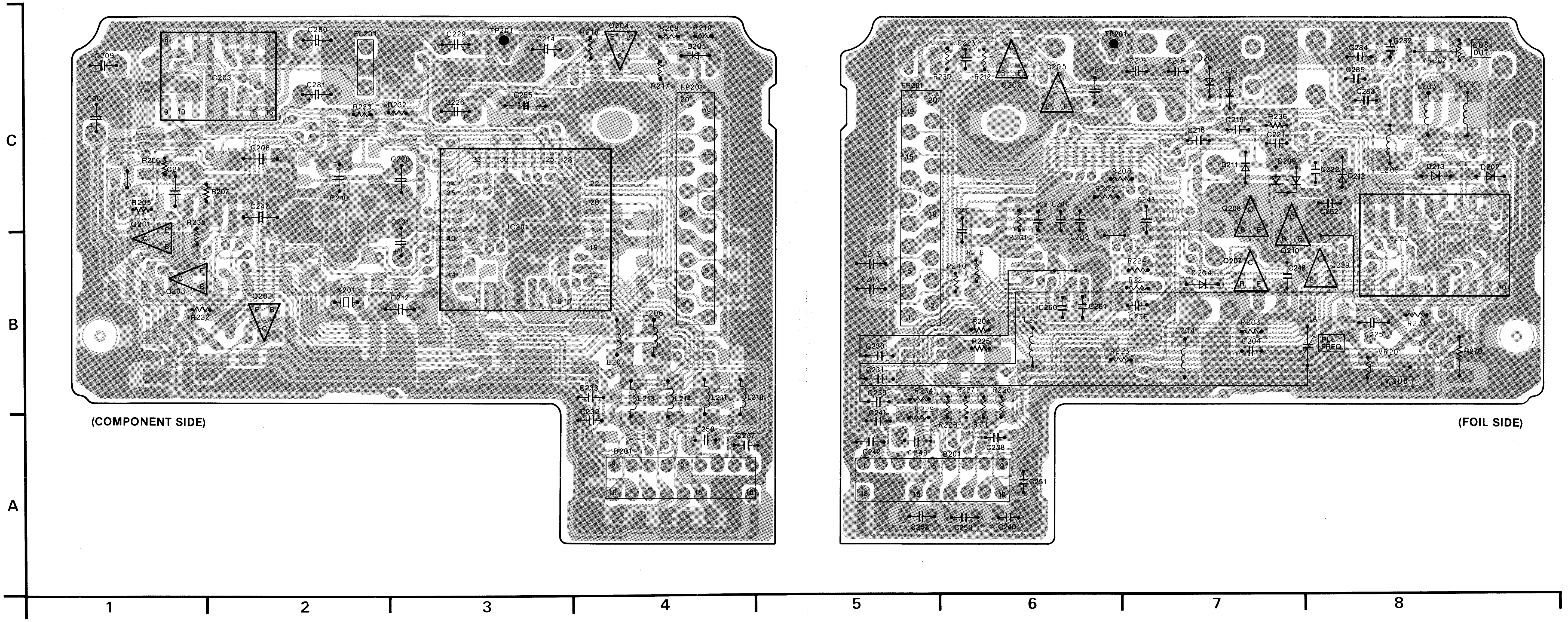
NOTE: THE WAVEFORM OF THIS DIAGRAM MEASURED WITH AIM THE CAMERA AT THE LOGARITHMIC GRAY SCALE CHART.

NOTE: THE MEASUREMENT MODE OF THE DC VOLTAGE ON THIS DIAGRAM IS STOP MODE WITH AIM THE CAMERA AT THE LOGARITHMIC GRAY SCALE CHART.

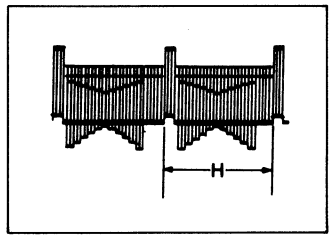
NOTE: DO NOT USE THE PART NUMBER SHOWN ON THIS DRAWING FOR ORDERING. THE CORRECT PART NUMBER IS SHOWN IN THE PARTS LIST, AND MAY BE SLIGHTLY DIFFERENT OR AMENDED SINCE THIS DRAWING WAS PREPARED.

Back Page:
AUTO FOCUS Section

3-13. CCD DRIVE C.B.A. (VEP22082E)


C
B
A
1
2
3
4
5
6
7
8
(COMPONENT SIDE)
(FOIL SIDE)
IC201
IC202
IC203
FP201
B201
TP201
FL201
X201
Q201
Q202
Q203
Q204
Q205
Q206
Q207
Q208
Q209
Q210
VR201
VR202
CCS OUT
PLL FREQ
V.SUB

CCD DRIVE CIRCUIT TP (Test Point) WAVEFORM (REF.NO.200 Series)



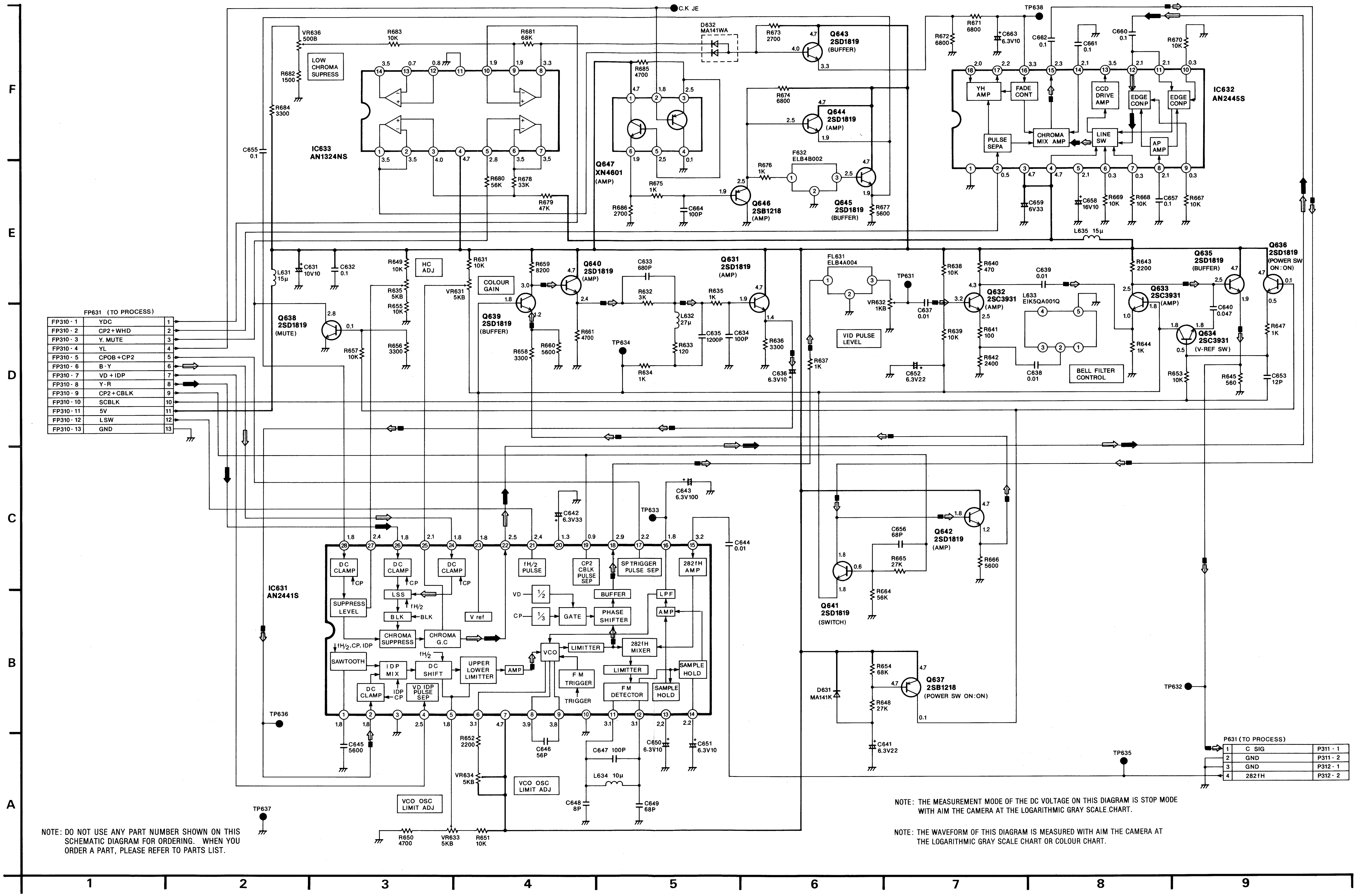
TP201 STOP
0.2V/20μsec. div. 0.8Vp-p

CCD DRIVE C.B.A.					
Transistor			**Test Point**		
Q201	C-1	Ⓒ	TP201	C-3	Ⓒ
Q202	B-2	Ⓒ	TP201	C-6	Ⓕ
Q203	B-1	Ⓒ	**Adjustment**		
Q204	C-4	Ⓒ	C206	B-8	Ⓕ
Q205	C-6	Ⓕ	VR201	B-8	Ⓕ
Q206	C-6	Ⓕ	VR202	C-8	Ⓕ
Q207	B-7	Ⓕ	**Connector**		
Q208	C-7	Ⓕ	B201	A-4	Ⓒ
Q209	B-8	Ⓕ	B201	A-6	Ⓕ
Q210	B-7	Ⓕ	FP201	C-4	Ⓒ
Integrated Circuit			FP201	C-5	Ⓕ
IC201	C-3	Ⓒ			
IC202	B-8	Ⓕ			
IC203	C-2	Ⓒ			

ADDRESS INFORMATION
Ⓒ...COMPONENT SIDE
Ⓕ...FOIL SIDE

3-14. SECAM ENCODER SCHEMATIC DIAGRAM

R-Y SIGNAL   B-Y SIGNAL   CHROMINANCE SIGNAL


FP631 (TO PROCESS)
FP310 - 1 YDC 1
FP310 - 2 CP2+WHD 2
FP310 - 3 Y. MUTE 3
FP310 - 4 YL 4
FP310 - 5 CPOB+CP2 5
FP310 - 6 B - Y 6
FP310 - 7 VD + IDP 7
FP310 - 8 Y - R 8
FP310 - 9 CP2+CBLK 9
FP310 - 10 SCBLK 10
FP310 - 11 5V 11
FP310 - 12 LSW 12
FP310 - 13 GND 13
P631 (TO PROCESS)
1 C SIG P311 - 1
2 GND P311 - 2
3 GND P312 - 1
4 282fH P312 - 2
C.K JE
IC633 AN1324NS
LOW CHROMA SUPRESS
VR636 500B
R683 10K
R681 68K
R682 1500
R684 3300
C655 0.1
R680 56K
R678 33K
R679 47K
D632 MA141WA
R673 2700
Q643 2SD1819 (BUFFER)
R685 4700
Q647 XN4601 (AMP)
R674 6800
Q644 2SD1819 (AMP)
F632 ELB4B002
R676 1K
R675 1K
R686 2700
C664 100P
Q646 2SB1218 (AMP)
Q645 2SD1819 (BUFFER)
R677 5600
TP638
R671 6800
R672 6800
C663 6.3V10
C662 0.1
C661 0.1
C660 0.1
R670 10K
IC632 AN2445S
YH AMP
FADE CONT
CCD DRIVE AMP
EDGE CONP
EDGE CONP
PULSE SEPA
CHROMA MIX AMP
LINE SW
AP AMP
C659 6V33
C658 16V10
R669 10K
R668 10K
C657 0.1
R667 10K
L635 15µ
L631 15µ
C631 10V10
C632 0.1
Q638 2SD1819 (MUTE)
R657 10K
R649 10K
R635 5KB
R655 10K
R656 3300
HC ADJ
R631 10K
VR631 5KB
COLOUR GAIN
Q639 2SD1819 (BUFFER)
R659 8200
R658 3300
R660 5600
Q640 2SD1819 (AMP)
R661 4700
C633 680P
R632 3K
L632 27µ
R633 120
TP634
R634 1K
R635 1K
C635 1200P
C634 100P
Q631 2SD1819 (AMP)
R636 3300
C636 6.3V10
R637 1K
FL631 ELB4A004
VR632 1KB
TP631
C637 0.01
VID PULSE LEVEL
C652 6.3V22
R638 10K
R639 10K
Q632 2SC3931 (AMP)
R640 470
R641 100
R642 2400
L633 EIK5QA001Q
C639 0.01
C638 0.01
BELL FILTER CONTROL
R643 2200
R644 1K
Q633 2SC3931 (AMP)
Q634 2SC3931 (V-REF SW)
Q635 2SD1819 (BUFFER)
Q636 2SD1819 (POWER SW ON:ON)
C640 0.047
R647 1K
R653 10K
R645 560
C653 12P
IC631 AN2441S
DC CLAMP
SUPPRESS LEVEL
LSS
BLK
CHROMA SUPPRESS
CHROMA G.C
SAWTOOTH
IDP MIX
DC SHIFT
UPPER LOWER LIMITTER
AMP
DC CLAMP
VD IDP PULSE SEP
V ref
fH/2 PULSE
CP2 CBLK PULSE SEP
SP TRIGGER PULSE SEP
282fH AMP
BUFFER
GATE
PHASE SHIFTER
VCO
LIMITTER
282fH MIXER
LIMITTER
FM TRIGGER
FM DETECTOR
SAMPLE HOLD
SAMPLE HOLD
LPF
AMP
TRIGGER
C642 6.3V33
TP633
C643 6.3V100
C644 0.01
TP636
C645 5600
R652 2200
VR634 5KB
C646 56P
C647 100P
L634 10µ
C648 8P
C649 68P
C650 6.3V10
C651 6.3V10
VCO OSC LIMIT ADJ
VCO OSC LIMIT ADJ
R650 4700
VR633 5KB
R651 10K
TP637
Q641 2SD1819 (SWITCH)
C656 68P
R665 27K
R664 56K
Q642 2SD1819 (AMP)
R666 5600
D631 MA141K
R654 68K
R648 27K
C641 6.3V22
Q637 2SB1218 (POWER SW ON:ON)
TP632
TP635
F
E
D
C
B
A
1
2
3
4
5
6
7
8
9

NOTE: DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING. WHEN YOU ORDER A PART, PLEASE REFER TO PARTS LIST.

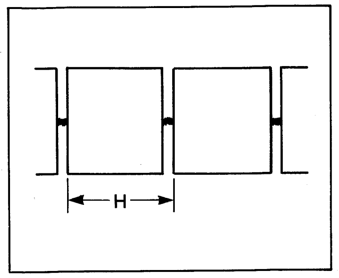
NOTE: THE MEASUREMENT MODE OF THE DC VOLTAGE ON THIS DIAGRAM IS STOP MODE WITH AIM THE CAMERA AT THE LOGARITHMIC GRAY SCALE CHART.

NOTE: THE WAVEFORM OF THIS DIAGRAM IS MEASURED WITH AIM THE CAMERA AT THE LOGARITHMIC GRAY SCALE CHART OR COLOUR CHART.

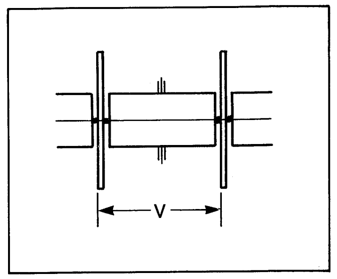
Back Page:
CCD DRIVE Section

3-15. SECAM ENCODER C.B.A. (VEP26059A)

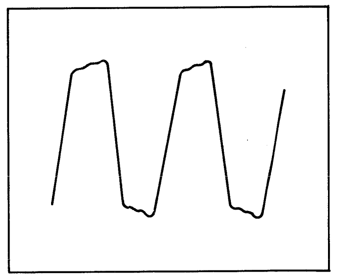
SECAM ENCODER CIRCUIT TP (Test Point) WAVEFORM (REF. NO. 600 Series)



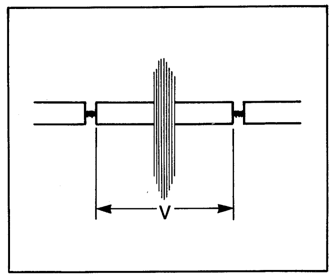
TP631 STOP
50mV/20μsec. div. 0.13Vp-p



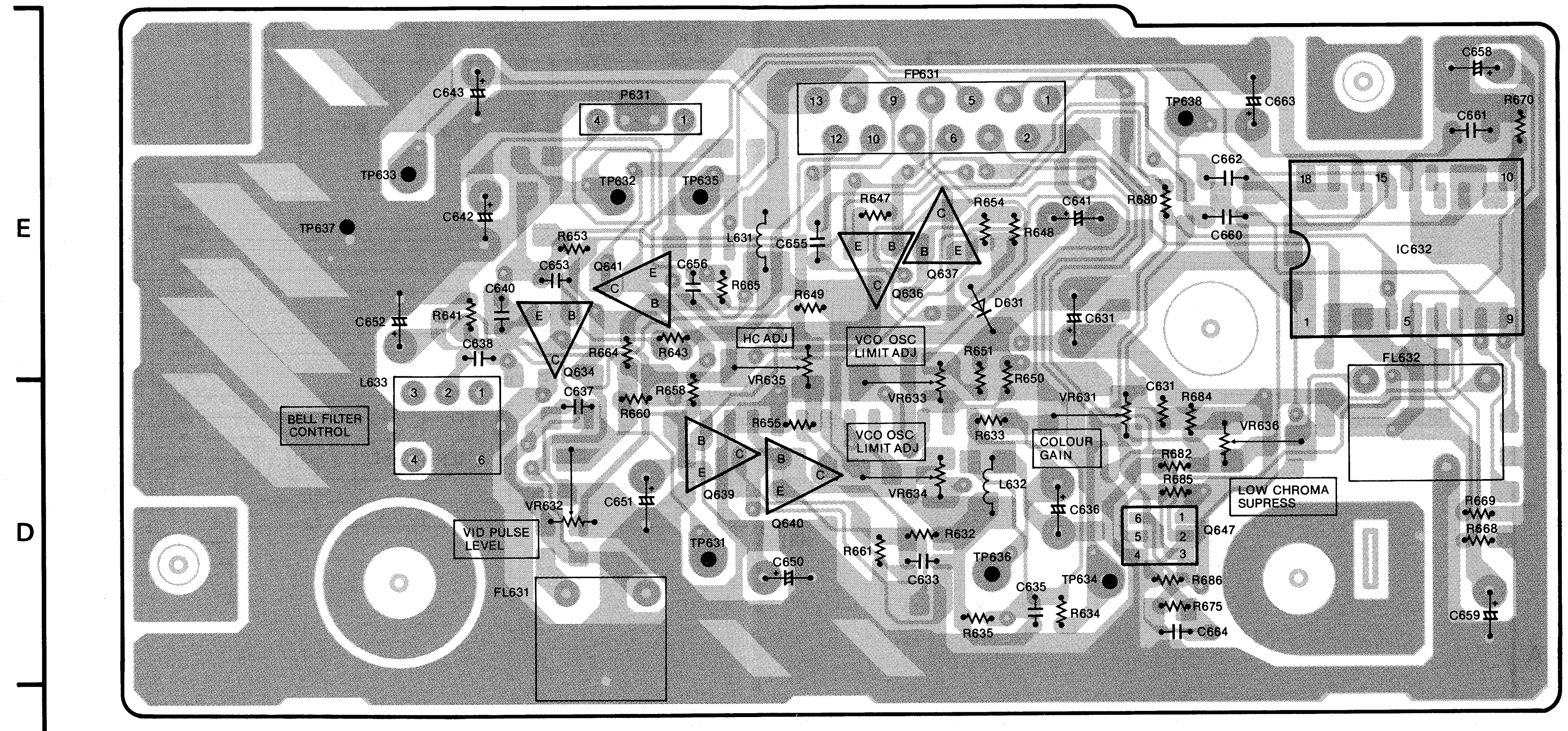
TP632 STOP
0.1V/5msec. div. 0.46Vp-p



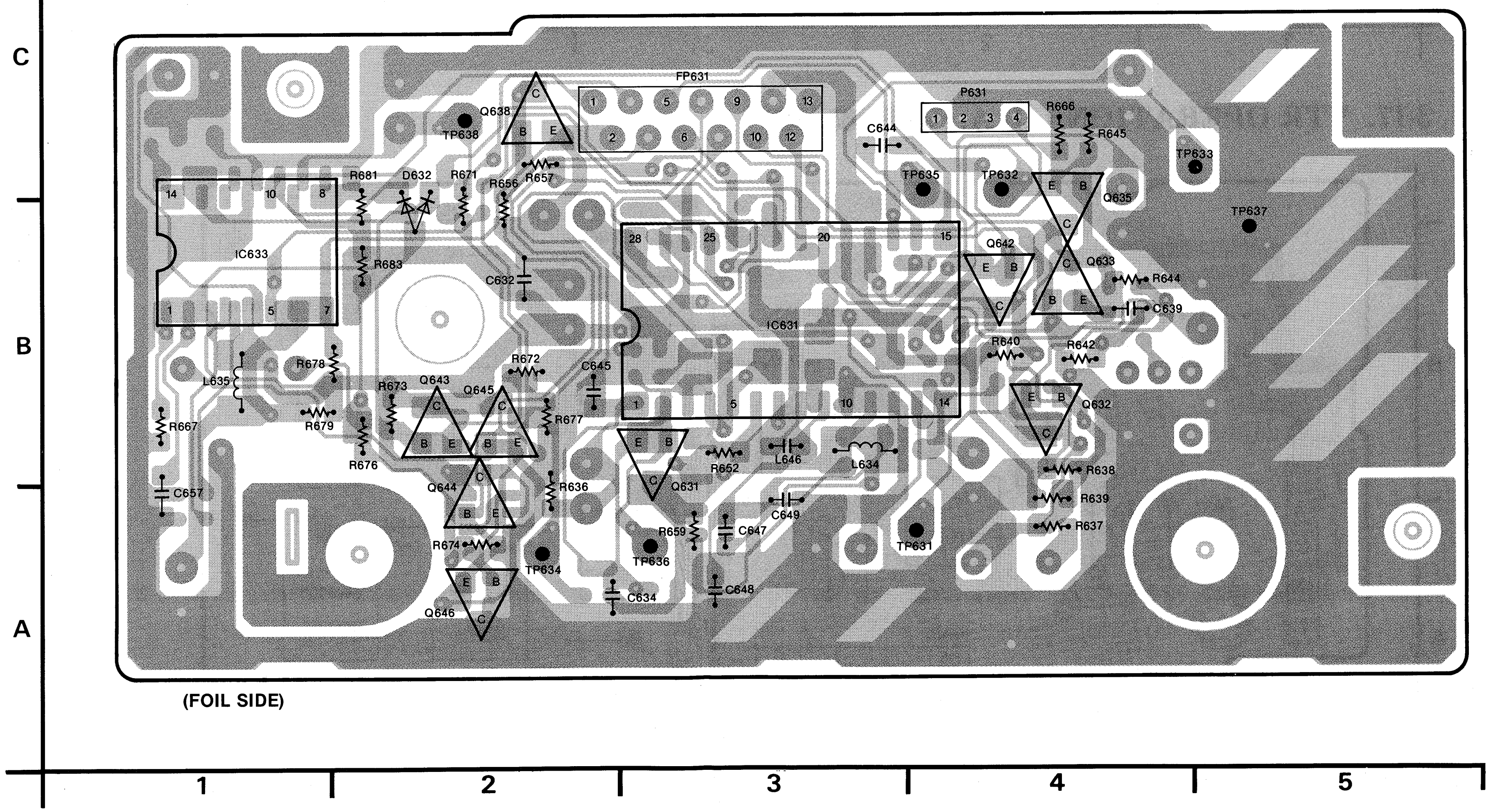
TP635 STOP
0.2V/0.1μsec. div. 0.5Vp-p



TP636 STOP
0.1V/5msec. div. 0.48Vp-p


E
D
FP631
P631
C643
C658
TP638
C663
C661
R670
TP633
TP632
TP635
C662
IC632
TP637
C642
R647
R654
C641
R680
C660
L631
C655
R648
R653
C653
Q641
C656
Q637
C640
R685
Q636
R649
D631
C652
R641
C631
C638
R664
R643
HC ADJ
VCO OSC LIMIT ADJ
R651
FL632
L633
C637
R658
VR635
R650
VR633
VR631
C631
R684
R660
Q634
BELL FILTER CONTROL
R655
VR636
VCO OSC LIMIT ADJ
R633
COLOUR GAIN
R682
R685
L632
LOW CHROMA SUPRESS
VR632
C651
Q639
VR634
C636
Q647
R669
R668
VID PULSE LEVEL
TP631
R632
Q640
R661
C650
TP636
C633
TP634
R686
FL631
C635
R675
R634
C659
R635
C664

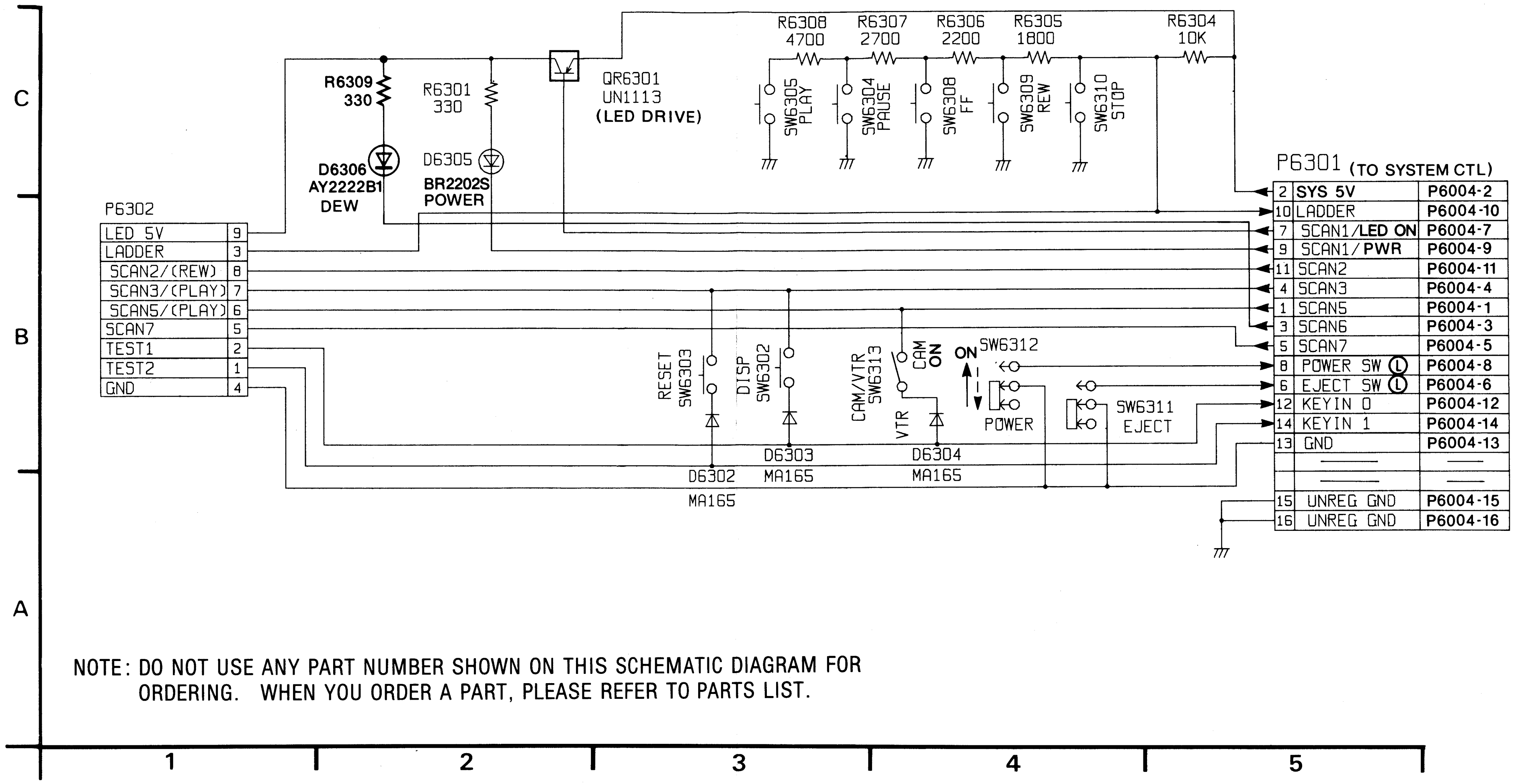
(COMPONENT SIDE)


C
B
A
1
2
3
4
5
FP631
Q638
TP638
P631
R666
C644
R645
TP633
R681
D632
R671
R656
R657
TP635
TP632
Q635
TP637
IC633
Q642
Q633
R683
C632
R644
C639
IC631
R640
R642
R678
R672
C645
L635
R673
Q643
Q645
Q632
R667
R679
R677
R676
L646
L634
R652
Q631
R638
Q644
R636
R639
C657
C649
R637
R659
C647
R674
TP636
TP631
TP634
C648
C634
Q646

(FOIL SIDE)

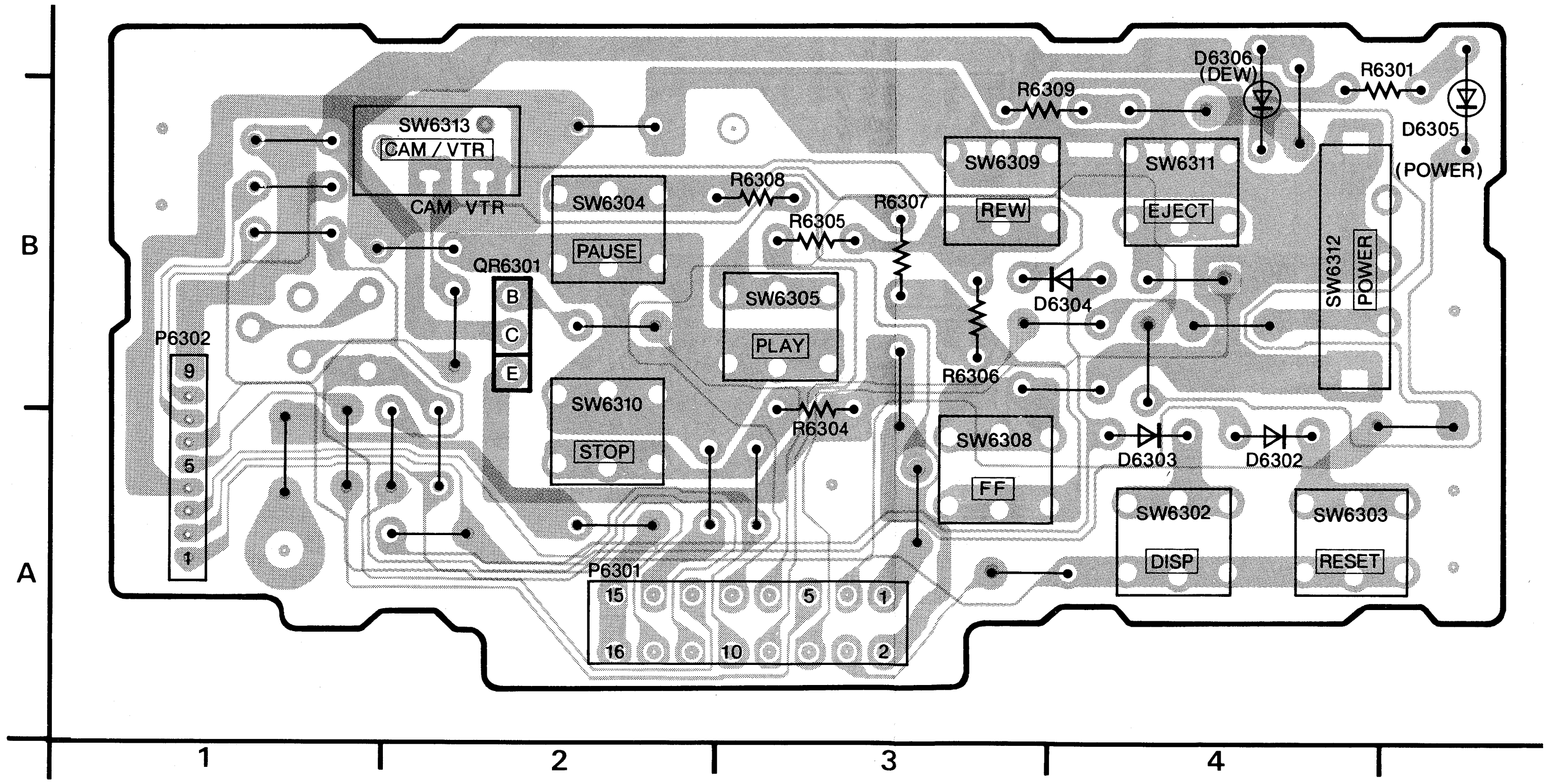
SECAM ENCODER C.B.A.	
Transistor	
Q631	A-3 Ⓕ
Q632	B-4 Ⓕ
Q633	B-4 Ⓕ
Q634	D-2 Ⓒ
Q635	B-4 Ⓕ
Q636	E-3 Ⓒ
Q637	E-3 Ⓒ
Q638	C-2 Ⓕ
Q639	D-3 Ⓒ
Q641	E-2 Ⓒ
Q642	B-4 Ⓕ
Q644	A-2 Ⓕ
Q645	B-2 Ⓕ
Q646	A-2 Ⓕ
Integrated Circuit	
IC631	B-3 Ⓕ
IC632	E-5 Ⓒ
IC633	B-1 Ⓕ
Test Point	
TP631	D-3 Ⓒ
TP631	A-4 Ⓕ
TP632	E-2 Ⓒ
TP632	C-4 Ⓕ
TP633	E-2 Ⓒ
TP633	C-5 Ⓕ
TP634	D-4 Ⓒ
TP634	A-2 Ⓕ
TP635	E-3 Ⓒ
TP635	C-4 Ⓕ
TP636	D-4 Ⓒ
TP636	A-3 Ⓕ
TP637	E-1 Ⓒ
TP637	C-5 Ⓕ
TP638	E-4 Ⓒ
TP638	C-2 Ⓕ
Adjustment	
L633	D-2 Ⓒ
VR631	D-4 Ⓒ
VR632	D-2 Ⓒ
VR633	D-3 Ⓒ
VR634	D-3 Ⓒ
VR635	D-3 Ⓒ
VR636	D-4 Ⓒ
Connector	
FP631	E-4 Ⓒ
FP631	C-3 Ⓕ
P631	E-3 Ⓒ
P631	C-4 Ⓕ

3-16. VTR OPERATION SCHEMATIC DIAGRAM


C
B
A
1
2
3
4
5
R6308 4700
R6307 2700
R6306 2200
R6305 1800
R6304 10K
R6309 330
R6301 330
QR6301 UN1113 (LED DRIVE)
SW6305 PLAY
SW6304 PAUSE
SW6308 FF
SW6309 REW
SW6310 STOP
D6306 AY2222B1 DEW
D6305 BR2202S POWER
P6302
LED 5V 9
LADDER 3
SCAN2/(REW) 8
SCAN3/(PLAY) 7
SCAN5/(PLAY) 6
SCAN7 5
TEST1 2
TEST2 1
GND 4
RESET SW6303
DISP SW6302
CAM/VTR SW6313
CAM ON
VTR
ON
SW6312
POWER
SW6311 EJECT
D6302 MA165
D6303 MA165
D6304 MA165
P6301 (TO SYSTEM CTL)
2 SYS 5V P6004-2
10 LADDER P6004-10
7 SCAN1/LED ON P6004-7
9 SCAN1/PWR P6004-9
11 SCAN2 P6004-11
4 SCAN3 P6004-4
1 SCAN5 P6004-1
3 SCAN6 P6004-3
5 SCAN7 P6004-5
8 POWER SW Ⓛ P6004-8
6 EJECT SW Ⓛ P6004-6
12 KEYIN 0 P6004-12
14 KEYIN 1 P6004-14
13 GND P6004-13
15 UNREG GND P6004-15
16 UNREG GND P6004-16

NOTE: DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING. WHEN YOU ORDER A PART, PLEASE REFER TO PARTS LIST.

3-17. VTR OPERATION C.B.A. (VEP06592B)

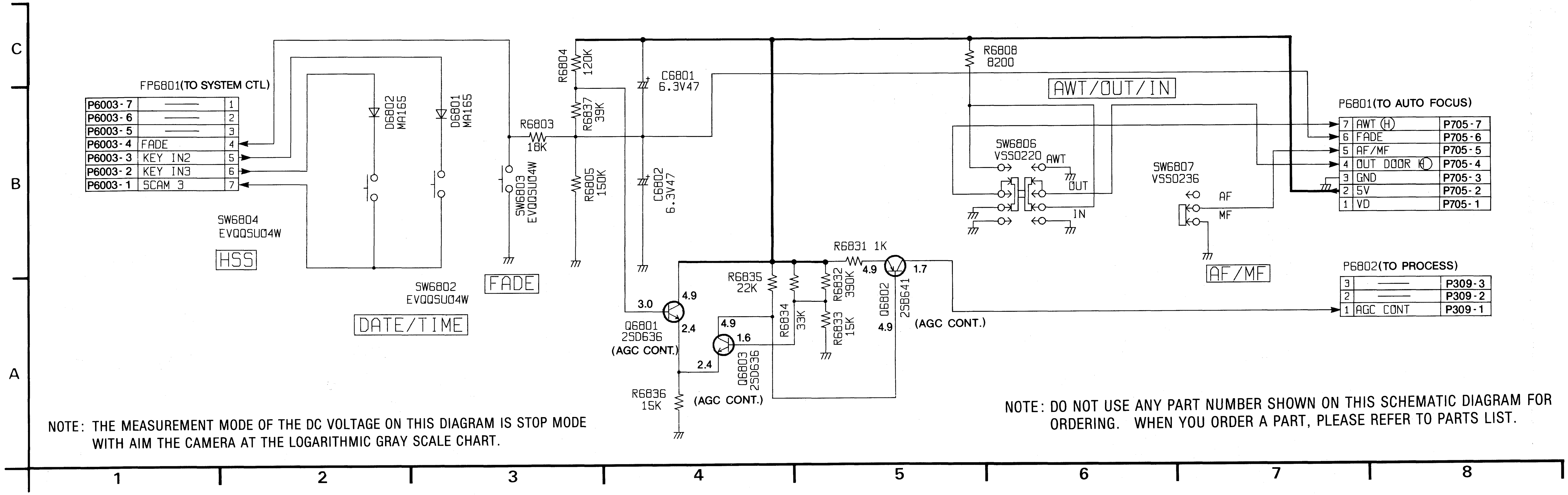

B
A
1
2
3
4
SW6313
CAM / VTR
CAM VTR
SW6304
PAUSE
QR6301
B
C
E
R6308
R6305
R6307
SW6305
PLAY
SW6310
STOP
R6304
P6302
9
5
1
P6301
15
5
1
16
10
2
R6309
D6306 (DEW)
R6301
D6305 (POWER)
SW6309
REW
SW6311
EJECT
SW6312
POWER
D6304
R6306
SW6308
FF
D6303
D6302
SW6302
DISP
SW6303
RESET

VTR OPERATION C.B.A.	
Transistor & Resistor	
QR6301	B-2
Connector	
P6301 P6302	A-2 B-1

ADDRESS INFORMATION

Back Page:
SECAM ENCODER Section

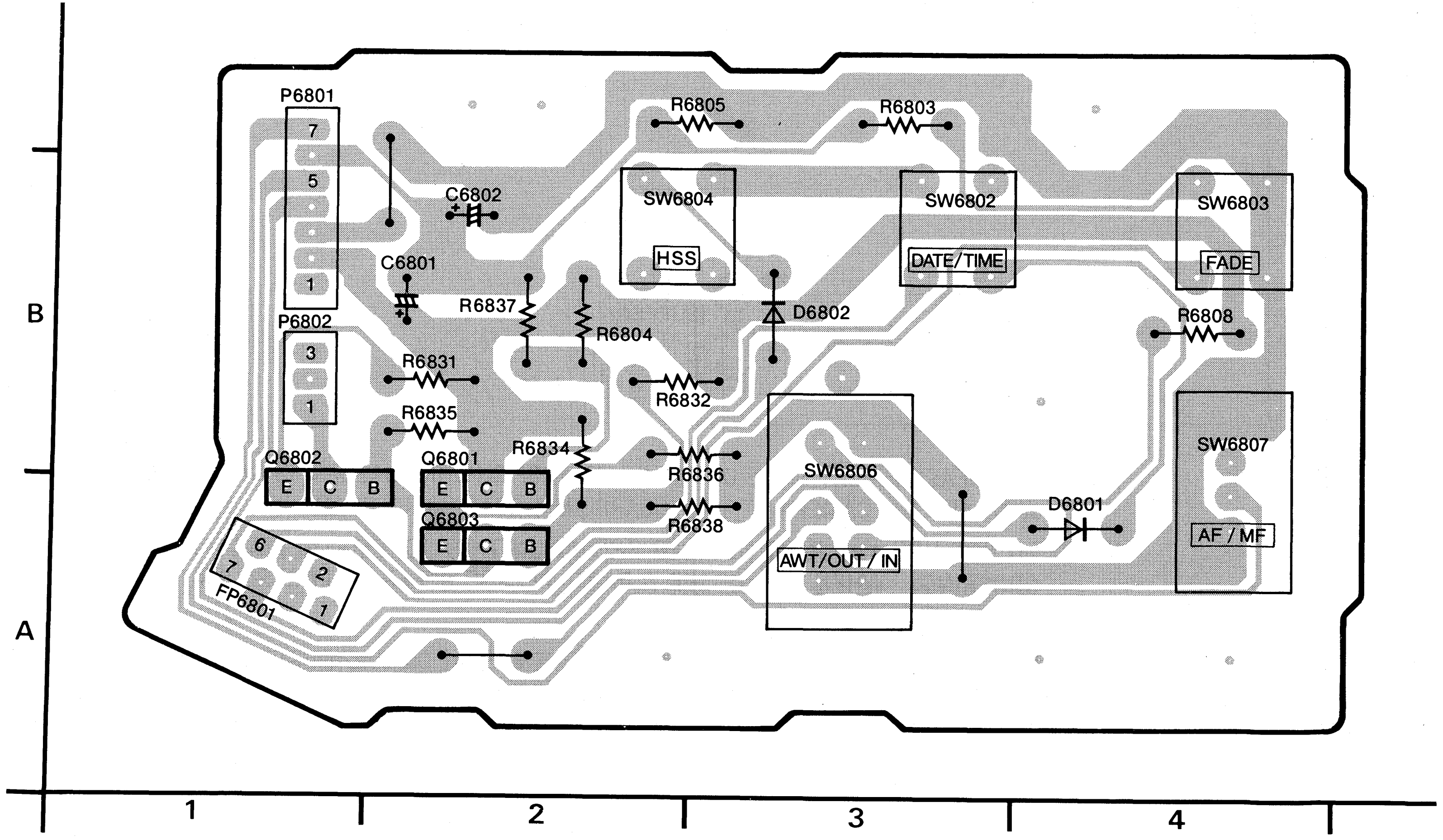
3-18. CAMERA OPERATION SCHEMATIC DIAGRAM


C
B
A
1
2
3
4
5
6
7
8
FP6801(TO SYSTEM CTL)
P6003-7 1
P6003-6 2
P6003-5 3
P6003-4 FADE 4
P6003-3 KEY IN2 5
P6003-2 KEY IN3 6
P6003-1 SCAM 3 7
SW6804
EVQQSU04W
HSS
D6802
MA165
D6801
MA165
SW6802
EVQQSU04W
DATE/TIME
R6803
18K
SW6803
EVQQSU04W
FADE
R6804
120K
R6837
39K
R6805
150K
C6801
6.3V47
C6802
6.3V47
R6808
8200
AWT/OUT/IN
SW6806
VSS0220
AWT
OUT
IN
SW6807
VSS0236
AF
MF
AF/MF
P6801(TO AUTO FOCUS)
7 AWT (H) P705-7
6 FADE P705-6
5 AF/MF P705-5
4 OUT DOOR (H) P705-4
3 GND P705-3
2 5V P705-2
1 VD P705-1
P6802(TO PROCESS)
3 P309-3
2 P309-2
1 AGC CONT P309-1
R6831 1K
R6835
22K
R6834
33K
R6832
390K
R6833
15K
Q6802
2SB641
(AGC CONT.)
Q6801
2SD636
(AGC CONT.)
Q6803
2SD636
(AGC CONT.)
R6836
15K
3.0
4.9
2.4
4.9
1.6
2.4
4.9
1.7
4.9

NOTE: THE MEASUREMENT MODE OF THE DC VOLTAGE ON THIS DIAGRAM IS STOP MODE WITH AIM THE CAMERA AT THE LOGARITHMIC GRAY SCALE CHART.

NOTE: DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING. WHEN YOU ORDER A PART, PLEASE REFER TO PARTS LIST.

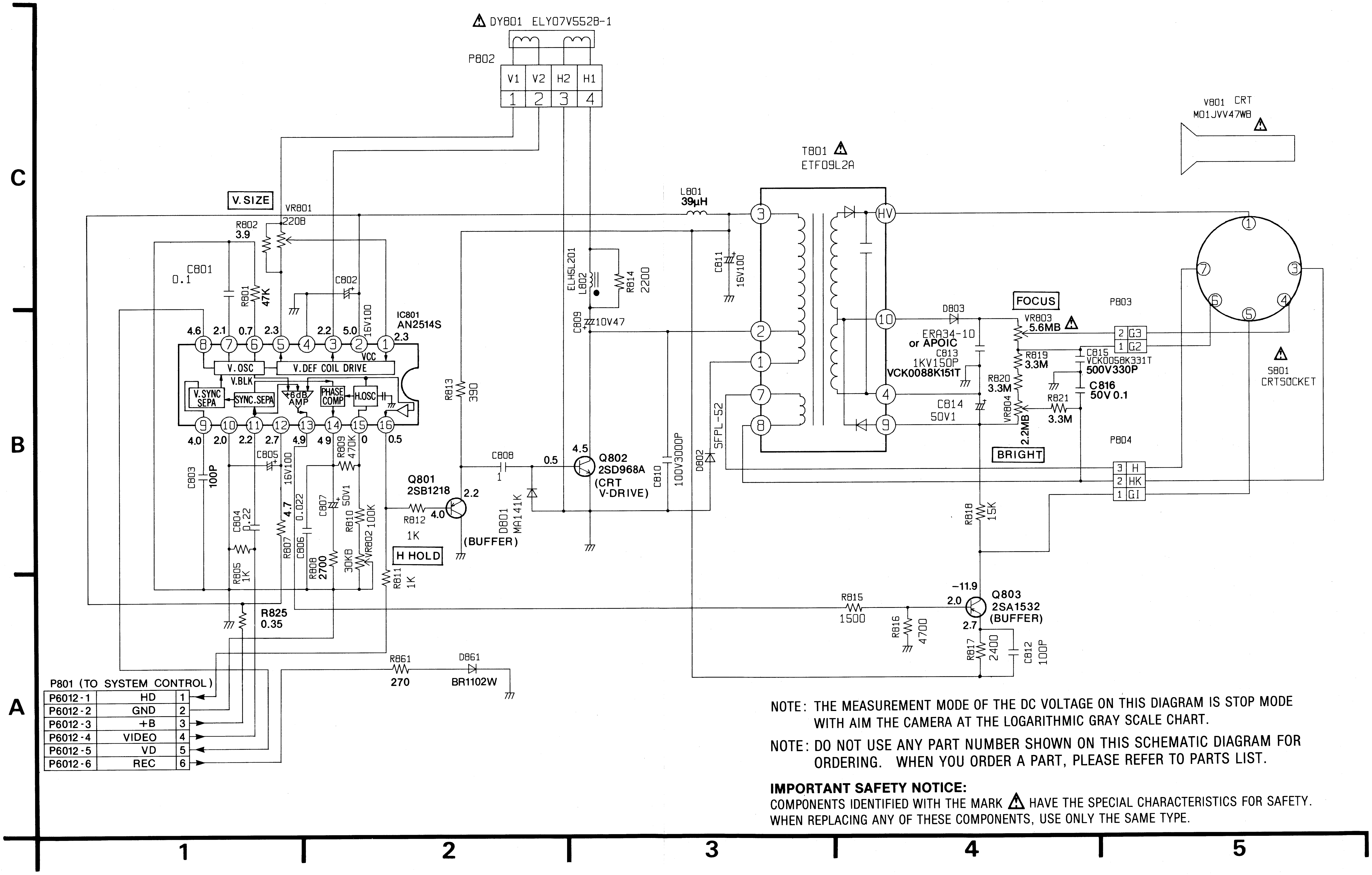
3-19. CAMERA OPERATION C.B.A. (VEP06644A)


B
A
1
2
3
4
P6801
7
5
1
P6802
3
1
C6802
C6801
R6837
R6804
R6805
R6803
SW6804
HSS
SW6802
DATE/TIME
SW6803
FADE
D6802
R6808
R6831
R6835
R6832
R6834
R6836
R6838
Q6802
E C B
Q6801
E C B
Q6803
E C B
FP6801
6 7 2 1
SW6806
AWT/OUT/IN
D6801
SW6807
AF/MF

CAMERA OPERATION C.B.A.	
Transistor	
Q6801	A-2
Q6802	A-1
Q6803	A-2
Connector	
P6801	B-1
P6802	B-2
FP6801	A-1

ADDRESS INFORMATION

3-20. E.V.F. SCHEMATIC DIAGRAM


⚠ DY801 ELY07V552B-1
P802
V1 V2 H2 H1
1 2 3 4
V801 CRT
M01JVV47WB ⚠
T801 ⚠
ETF09L2A
L801
39μH
V.SIZE
VR801
220B
R802
3.9
C801
0.1
R801
47K
C802
16V100
IC801
AN2514S
VCC
V.OSC
V.DEF COIL DRIVE
V.BLK
V.SYNC SEPA
SYNC.SEPA
+6dB AMP
PHASE COMP
H.OSC
4.6 2.1 0.7 2.3 2.2 5.0 2.3
4.0 2.0 2.2 2.7 4.9 4.9 0 0.5
C803
100P
C804
0.22
C805
16V100
R805
1K
R807
4.7
C806
0.022
C807
50V1
R806
2700
R809
470K
R810
100K
VR802
30KB
R811
1K
R825
0.35
R812
1K
4.0
2.2
Q801
2SB1218
(BUFFER)
H HOLD
R813
390
C808
1
0.5
D801
MA141K
4.5
Q802
2SD968A
(CRT V-DRIVE)
ELH5L201
L802
R814
2200
C809
10V47
C810
100V3000P
C811
16V100
D802
SFPL-52
D803
ERA34-10
or APOIC
C813
1KV150P
VCK0088K151T
C814
50V1
FOCUS
VR803
5.6MB ⚠
R819
3.3M
R820
3.3M
VR804
2.2MB
R821
3.3M
C815
VCK0058K331T
500V330P
C816
50V 0.1
BRIGHT
P803
2 G3
1 G2
P804
3 H
2 HK
1 GI
⚠
S801
CRTSOCKET
HV
R818
15K
-11.9
Q803
2SA1532
(BUFFER)
2.0
2.7
R815
1500
R816
4700
R817
2400
C812
100P
R861
270
D861
BR1102W
P801 (TO SYSTEM CONTROL)
P6012-1 HD 1
P6012-2 GND 2
P6012-3 +B 3
P6012-4 VIDEO 4
P6012-5 VD 5
P6012-6 REC 6
C
B
A
1
2
3
4
5

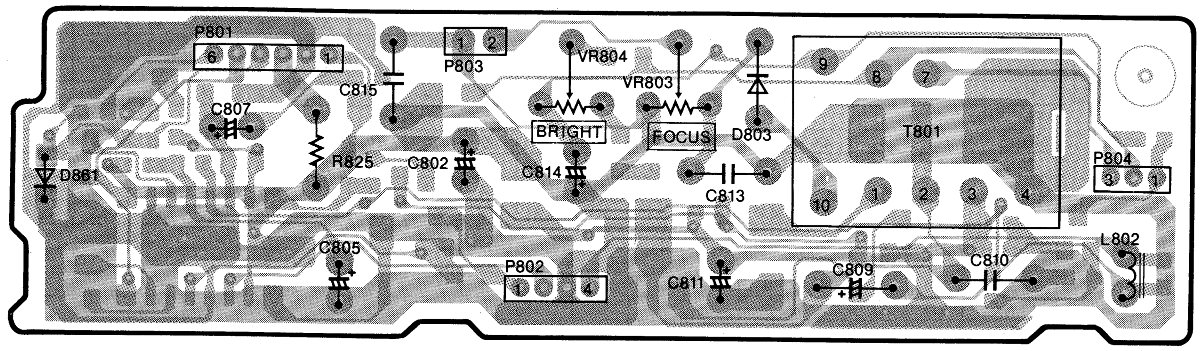
NOTE: THE MEASUREMENT MODE OF THE DC VOLTAGE ON THIS DIAGRAM IS STOP MODE WITH AIM THE CAMERA AT THE LOGARITHMIC GRAY SCALE CHART.

NOTE: DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING. WHEN YOU ORDER A PART, PLEASE REFER TO PARTS LIST.

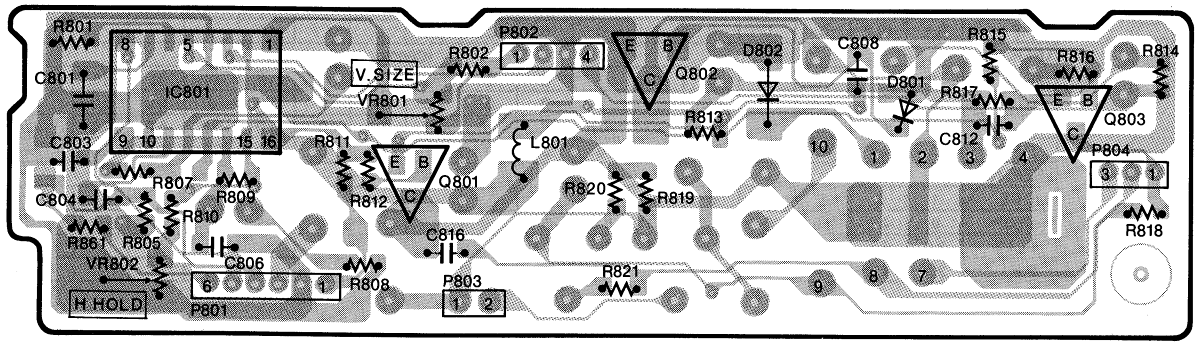
IMPORTANT SAFETY NOTICE:
COMPONENTS IDENTIFIED WITH THE MARK ⚠ HAVE THE SPECIAL CHARACTERISTICS FOR SAFETY. WHEN REPLACING ANY OF THESE COMPONENTS, USE ONLY THE SAME TYPE.

Back Page:
CAMERA OPERATION Section

3-21. E.V.F. C.B.A. (VEP28022B)


C
P801
6
1
1 2
P803
VR804
VR803
C807
C815
BRIGHT
FOCUS
D803
T801
9
8
7
10
1
2
3
4
D861
R825
C802
C814
C813
P804
3
1
C805
P802
1
4
C811
C809
C810
L802

(COMPONENT SIDE)


B
A
R801
C801
IC801
8
5
1
9
10
15
16
C803
C804
R861
R805
R807
R809
R810
VR802
C806
H HOLD
6
1
P801
V.SIZE
VR801
R802
P802
1
4
R811
R812
E
B
C
Q801
L801
C816
R808
P803
1 2
E
B
C
Q802
D802
C808
R813
R820
R819
R821
D801
R817
C812
R815
R816
R814
E
B
C
Q803
P804
3
1
R818
10
1
2
3
4
9
8
7

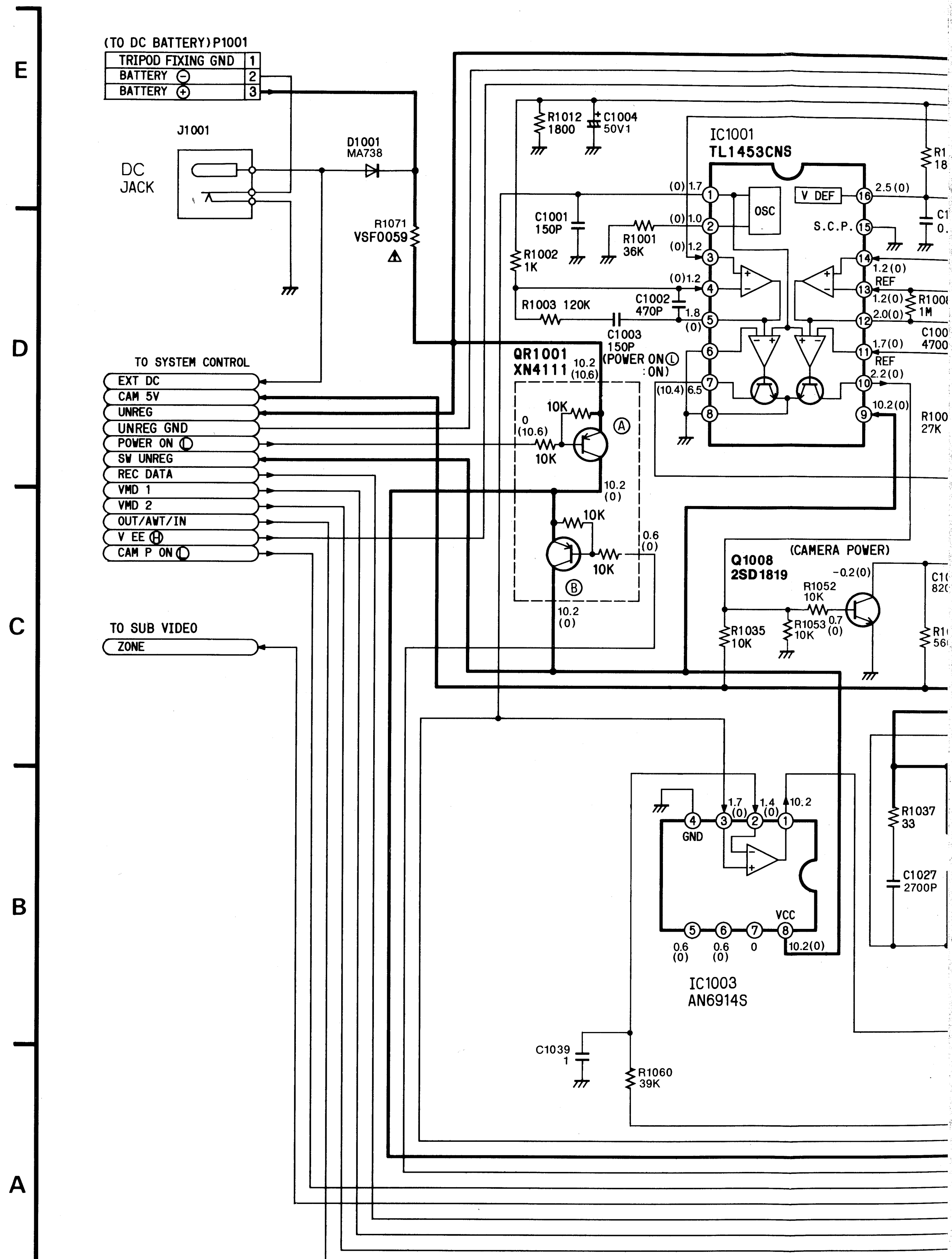
(FOIL SIDE)

1
2
3

E.V.F. C.B.A.					
Transistor			**Connector**		
Q801	A-2	Ⓕ	P801	A-1	Ⓕ
Q802	A-2	Ⓕ	P801	C-1	Ⓒ
Q803	A-3	Ⓕ	P802	A-2	Ⓕ
Integrated Circuit			P802	C-2	Ⓒ
			P803	A-2	Ⓕ
IC801	A-1	Ⓕ	P803	C-2	Ⓒ
Adjustment			P804	A-3	Ⓕ
			P804	C-3	Ⓒ
VR801	A-2	Ⓕ			
VR802	A-1	Ⓕ			
VR803	C-2	Ⓒ			
VR804	C-2	Ⓒ			

ADDRESS INFORMATION
Ⓒ...COMPONENT SIDE
Ⓕ...FOIL SIDE

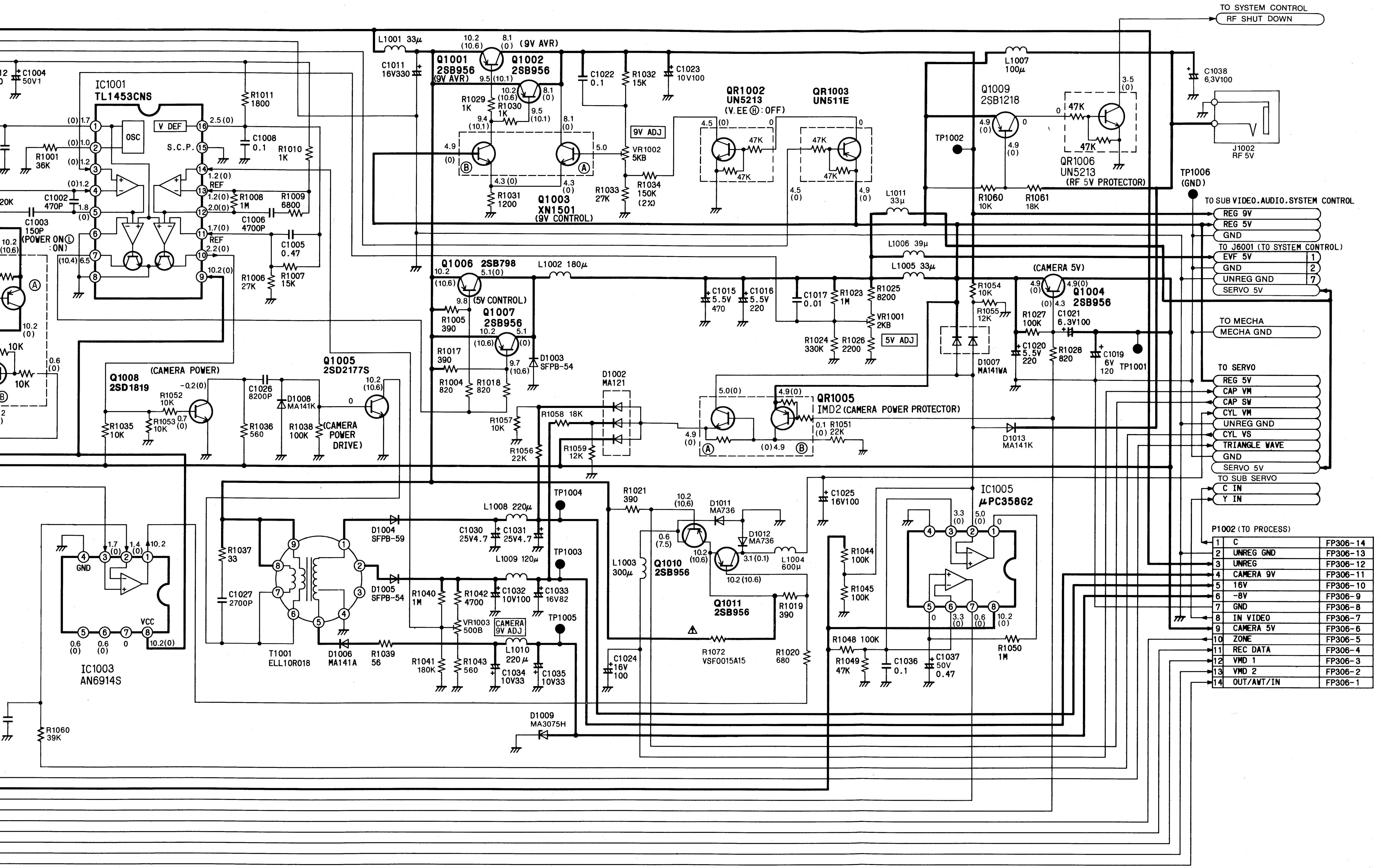
3-22. POWER SUPPLY SCHEMATIC DIAGRAM


E
D
C
B
A
(TO DC BATTERY) P1001
TRIPOD FIXING GND 1
BATTERY ⊖ 2
BATTERY ⊕ 3
J1001
DC JACK
D1001 MA738
R1071 VSF0059
TO SYSTEM CONTROL
EXT DC
CAM 5V
UNREG
UNREG GND
POWER ON Ⓛ
SW UNREG
REC DATA
VMD 1
VMD 2
OUT/AWT/IN
V EE Ⓗ
CAM P ON Ⓛ
TO SUB VIDEO
ZONE
R1012 1800
C1004 50V1
IC1001
TL1453CNS
C1001 150P
R1001 36K
R1002 1K
R1003 120K
C1002 470P
C1003 150P
OSC
V DEF
S.C.P.
REF
2.5(0)
1.2(0)
2.0(0)
1.7(0)
2.2(0)
10.2(0)
QR1001 XN4111
10.2 (10.6)
(POWER ON Ⓛ :ON)
10K
10K
0 (10.6)
10K
10K
10.2 (0)
0.6 (0)
Ⓐ
Ⓑ
Q1008 2SD1819
(CAMERA POWER)
R1052 10K
R1053 10K
R1035 10K
-0.2(0)
0.7 (0)
R1037 33
C1027 2700P
IC1003 AN6914S
GND
VCC
1.7 (0)
1.4 (0)
10.2
0.6 (0)
0.6 (0)
0
10.2(0)
C1039 1
R1060 39K
R1008 1M
R1009 27K

IMPORTANT SAFETY NOTICE:
COMPONENTS IDENTIFIED WITH THE MARK ⚠ HAVE THE SPECIAL CHARACTERISTICS FOR SAFETY.
WHEN REPLACING ANY OF THESE COMPONENTS, USE ONLY THE SAME TYPE.

1
2
3

AGRAM


IC1001 TL1453CNS
OSC
V DEF
S.C.P.
C1004 50V1
R1001 36K
C1002 470P
C1003 150P
(POWER ON Ⓛ :ON)
R1011 1800
C1008 0.1
R1010 1K
R1008 1M
R1009 6800
C1006 4700P
C1005 0.47
R1006 27K
R1007 15K
L1001 33μ
C1011 16V330
Q1001 2SB956 (9V AVR)
Q1002 2SB956
(9V AVR)
R1029 1K
R1030 1K
Q1003 XN1501 (9V CONTROL)
R1031 1200
C1022 0.1
R1032 15K
C1023 10V100
9V ADJ
VR1002 5KB
R1033 27K
R1034 150K (2%)
QR1002 UN5213 (V.EE Ⓗ : OFF)
QR1003 UN511E
L1007 100μ
Q1009 2SB1218
QR1006 UN5213 (RF 5V PROTECTOR)
C1038 6,3V100
J1002 RF 5V
TP1002
TP1006 (GND)
R1060 10K
R1061 18K
L1011 33μ
TO SYSTEM CONTROL
RF SHUT DOWN
TO SUB VIDEO.AUDIO.SYSTEM CONTROL
REG 9V
REG 5V
GND
TO J6001 (TO SYSTEM CONTROL)
EVF 5V
GND
UNREG GND
SERVO 5V
TO MECHA
MECHA GND
TO SERVO
REG 5V
CAP VM
CAP SW
CYL VM
UNREG GND
CYL VS
TRIANGLE WAVE
GND
SERVO 5V
TO SUB SERVO
C IN
Y IN
Q1006 2SB798 (5V CONTROL)
L1002 180μ
Q1007 2SB956
R1005 390
R1017 390
R1004 820
R1018 820
D1003 SFPB-54
C1015 5.5V 470
C1016 5.5V 220
C1017 0.01
R1023 1M
R1025 8200
VR1001 2KB
R1024 330K
R1026 2200
5V ADJ
L1006 39μ
L1005 33μ
(CAMERA 5V)
Q1004 2SB956
R1054 10K
R1055 12K
R1027 100K
C1021 6.3V100
C1020 5.5V 220
R1028 820
C1019 6V 120
TP1001
D1007 MA141WA
Q1008 2SD1819 (CAMERA POWER)
R1052 10K
R1053 10K
R1035 10K
C1026 8200P
D1008 MA141K
R1036 560
R1038 100K
Q1005 2SD2177S (CAMERA POWER DRIVE)
D1002 MA121
R1058 18K
R1057 10K
R1056 22K
R1059 12K
QR1005 IMD2 (CAMERA POWER PROTECTOR)
R1051 22K
D1013 MA141K
IC1003 AN6914S
GND
VCC
R1060 39K
T1001 ELL10R018
R1037 33
C1027 2700P
D1004 SFPB-59
D1005 SFPB-54
D1006 MA141A
R1039 56
L1008 220μ
C1030 25V4.7
C1031 25V4.7
L1009 120μ
R1040 1M
R1042 4700
C1032 10V100
C1033 16V82
VR1003 500B
CAMERA 9V ADJ
R1041 180K
R1043 560
L1010 220μ
C1034 10V33
C1035 10V33
TP1004
TP1003
TP1005
D1009 MA3075H
R1021 390
L1003 300μ
D1011 MA736
D1012 MA736
Q1010 2SB956
L1004 600μ
Q1011 2SB956
R1019 390
R1072 VSF0015A15
R1020 680
C1024 16V 100
C1025 16V100
IC1005 μPC358G2
R1044 100K
R1045 100K
R1048 100K
R1049 47K
C1036 0.1
C1037 50V 0.47
R1050 1M
P1002 (TO PROCESS)
1 C FP306-14
2 UNREG GND FP306-13
3 UNREG FP306-12
4 CAMERA 9V FP306-11
5 16V FP306-10
6 -8V FP306-9
7 GND FP306-8
8 IN VIDEO FP306-7
9 CAMERA 5V FP306-6
10 ZONE FP306-5
11 REC DATA FP306-4
12 VMD 1 FP306-3
13 VMD 2 FP306-2
14 OUT/AWT/IN FP306-1

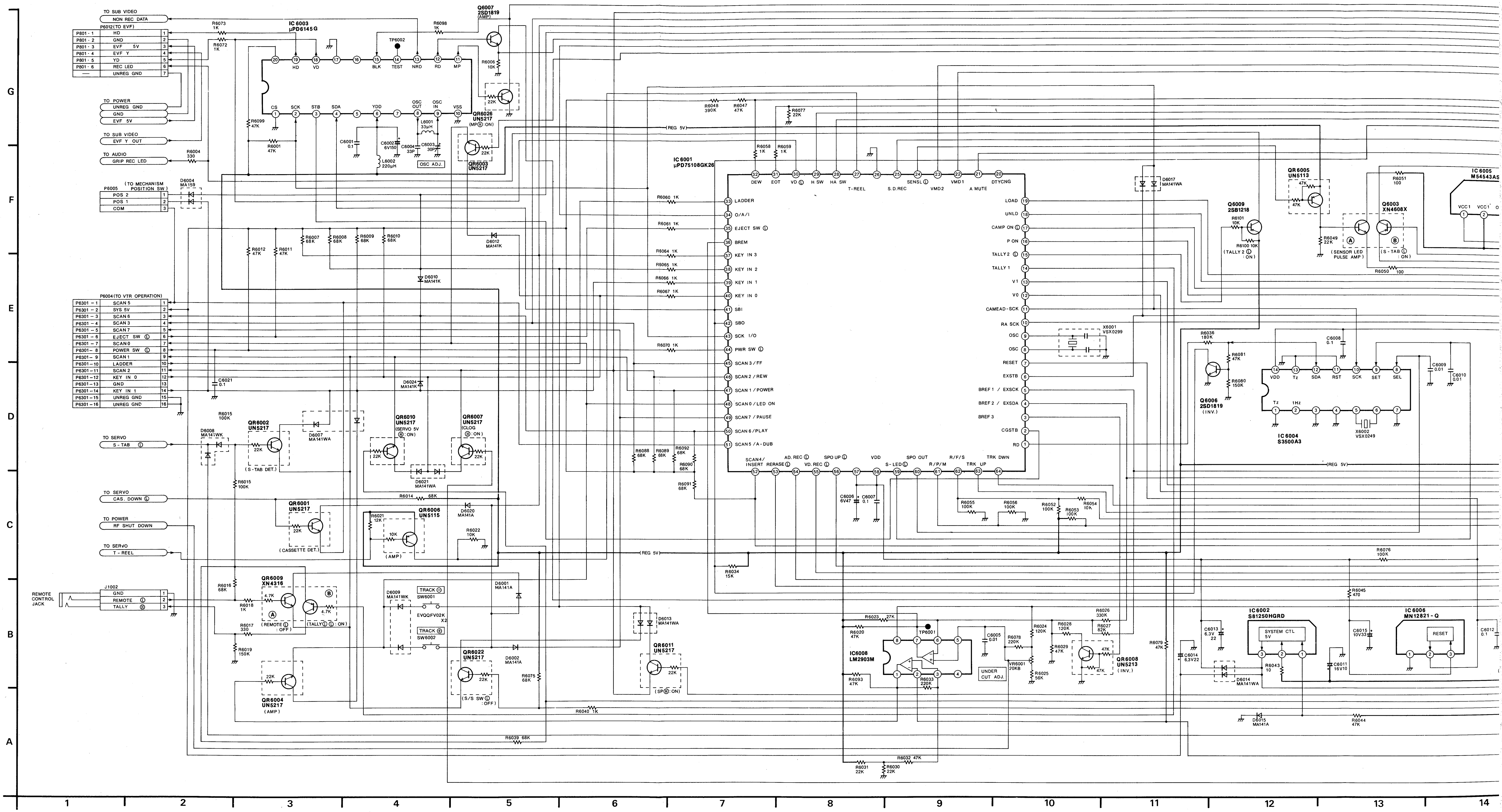
S FOR SAFETY.

NOTE: DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING. WHEN YOU ORDER A PART, PLEASE REFER TO PARTS LIST.

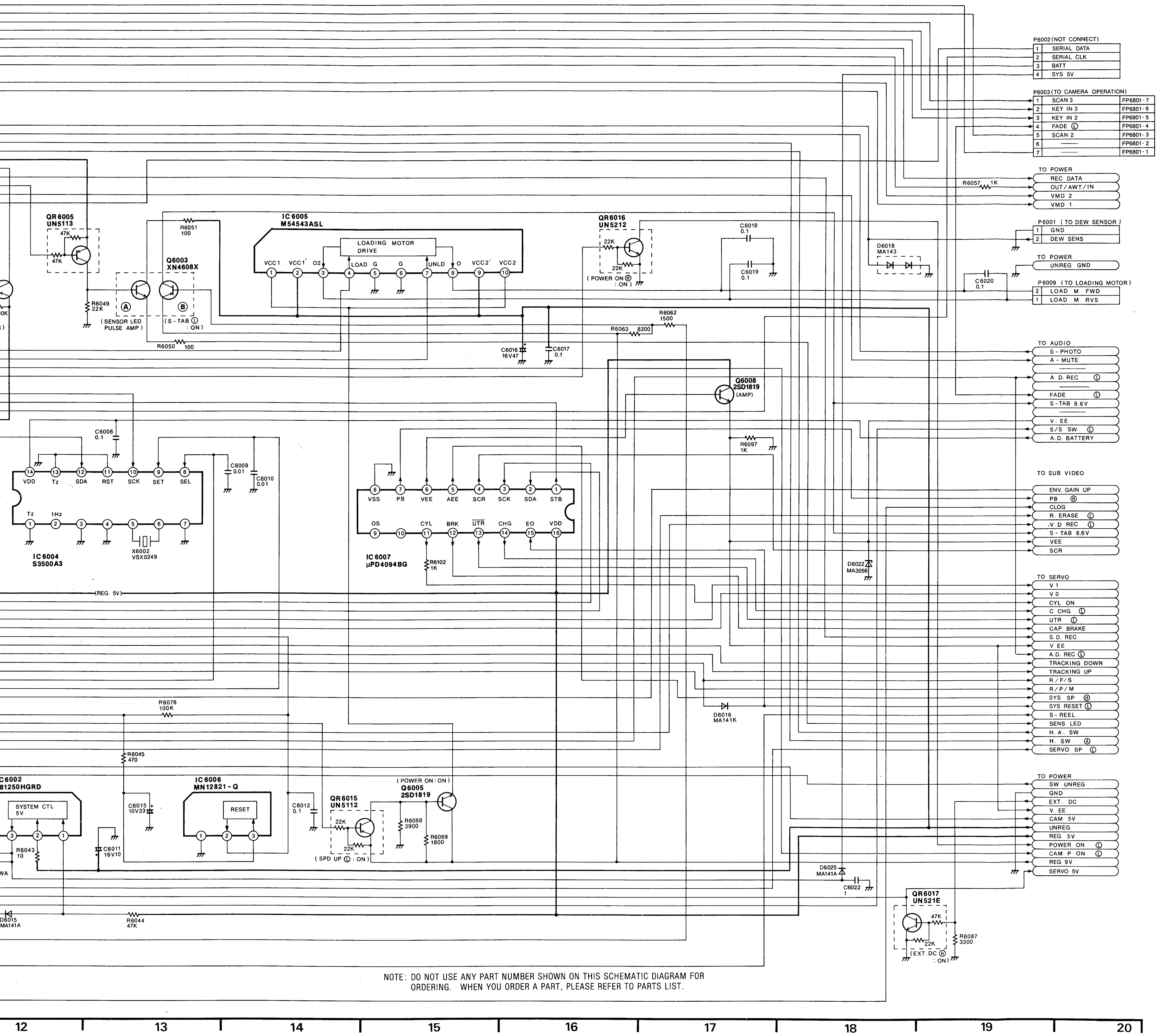
NOTE: THE MEASUREMENT MODE OF THE DC VOLTAGE IN THE BRACKETS ( ) ON THIS DIAGRAM IS POWER OFF MODE.
THE MEASUREMENT MODE OF THE DC VOLTAGE OUT OF THE BRACKETS ON THIS DIAGRAM IS STOP MODE.

3 4 5 6 7 8 9

3-23. SYSTEM CONTROL SCHEMATIC DIAGRAM


IC6003 μPD6145G
IC6001 μPD75108GK26
IC6002 S81250HGRD
IC6004 S3500A3
IC6005 M54543AS
IC6006 MN12821-Q
IC6008 LM2903M
Q6007 2SD1819 (AMP)
Q6009 2SB1218
Q6006 2SD1819 (INV.)
Q6003 XN4608X
QR6005 UN5113
QR6026 UN5217
QR6003 UN5217
QR6002 UN5217
QR6010 UN5217
QR6007 UN5217
QR6001 UN5217
QR6006 UN5115
QR6009 XN4316
QR6004 UN5217
QR6022 UN5217
QR6011 UN5217
QR6008 UN5213
P6012 (TO EVF)
P6005 (TO MECHANISM POSITION SW)
P6004 (TO VTR OPERATION)
J1002
REMOTE CONTROL JACK
TO SUB VIDEO
NON REC DATA
TO POWER
TO AUDIO
GRIP REC LED
TO SERVO
S-TAB
CAS. DOWN
RF SHUT DOWN
T-REEL
X6001 VSX0299
X6002 VSX0249
SW6001
SW6002
TRACK
OSC ADJ.
UNDER CUT ADJ.
REG 5V
SYSTEM CTL 5V
RESET
G
F
E
D
C
B
A
1
2
3
4
5
6
7
8
9
10
11
12
13
14

Back Page:
E.V.F. & POWER SUPPLY Section


P6002 (NOT CONNECT)
1 SERIAL DATA
2 SERIAL CLK
3 BATT
4 SYS 5V
P6003 (TO CAMERA OPERATION)
1 SCAN 3 FP6801-7
2 KEY IN 3 FP6801-6
3 KEY IN 2 FP6801-5
4 FADE Ⓛ FP6801-4
5 SCAN 2 FP6801-3
6 FP6801-2
7 FP6801-1
TO POWER
REC DATA
OUT / AWT / IN
VMD 2
VMD 1
R6057 1K
P6001 (TO DEW SENSOR)
1 GND
2 DEW SENS
TO POWER
UNREG GND
P6009 (TO LOADING MOTOR)
2 LOAD M FWD
1 LOAD M RVS
C6020 0.1
D6018 MA143
TO AUDIO
S-PHOTO
A-MUTE
A D. REC Ⓛ
FADE Ⓛ
S-TAB 8.6V
V. EE
S/S SW Ⓛ
A.D. BATTERY
TO SUB VIDEO
ENV. GAIN UP
PB Ⓗ
CLOG
R. ERASE Ⓛ
V D REC Ⓛ
S-TAB 8.6V
VEE
SCR
D6022 MA3056
TO SERVO
V 1
V 0
CYL ON
C CHG Ⓛ
UTR Ⓛ
CAP. BRAKE
S.D. REC
V EE
A.D. REC Ⓛ
TRACKING DOWN
TRACKING UP
R / F / S
R / P / M
SYS SP Ⓗ
SYS RESET Ⓛ
S-REEL
SENS LED
H. A. SW
H. SW Ⓐ
SERVO SP Ⓛ
TO POWER
SW UNREG
GND
EXT. DC
V. EE
CAM 5V
UNREG
REG 5V
POWER ON Ⓛ
CAM P ON Ⓛ
REG 9V
SERVO 5V
D6025 MA141A
C6022 1
QR6017 UN521E
47K
22K
R6087 3300
(EXT. DC Ⓗ : ON)
QR6005 UN5113
47K
47K
R6049 22K
Q6003 XN4608X
Ⓐ
Ⓑ
(SENSOR LED PULSE AMP)
(S-TAB Ⓛ : ON)
R6051 100
R6050 100
IC6005 M54543ASL
LOADING MOTOR DRIVE
VCC1 VCC1' O2 LOAD G G UNLD O VCC2' VCC2
C6016 16V47
C6017 0.1
QR6016 UN5212
22K
22K
(POWER ON Ⓗ : ON)
C6018 0.1
C6019 0.1
R6062 1500
R6063 8200
Q6008 2SD1819 (AMP)
R6097 1K
C6008 0.1
VDD Tz SDA RST SCK SET SEL
Tz 1Hz
C6009 0.01
C6010 0.01
IC6004 S3500A3
X6002 VSX0249
VSS PB VEE AEE SCR SCK SDA STB
OS CYL BRK UTR CHG EO VDD
IC6007 μPD4094BG
R6102 1K
(REG 5V)
R6076 100K
D6016 MA141K
R6045 470
C6002 81250HGRD
SYSTEM CTL 5V
R6043 10
C6015 10V33
C6011 16V10
IC6006 MN12821-Q
RESET
C6012 0.1
QR6015 UN5112
22K
22K
(SPD UP Ⓛ : ON)
(POWER ON : ON)
Q6005 2SD1819
R6068 3900
R6069 1800
D6015 MA141A
R6044 47K
12 13 14 15 16 17 18 19 20

NOTE: DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING. WHEN YOU ORDER A PART, PLEASE REFER TO PARTS LIST.

SYSTEM CONTROL Section ICs VOLTAGE CHART

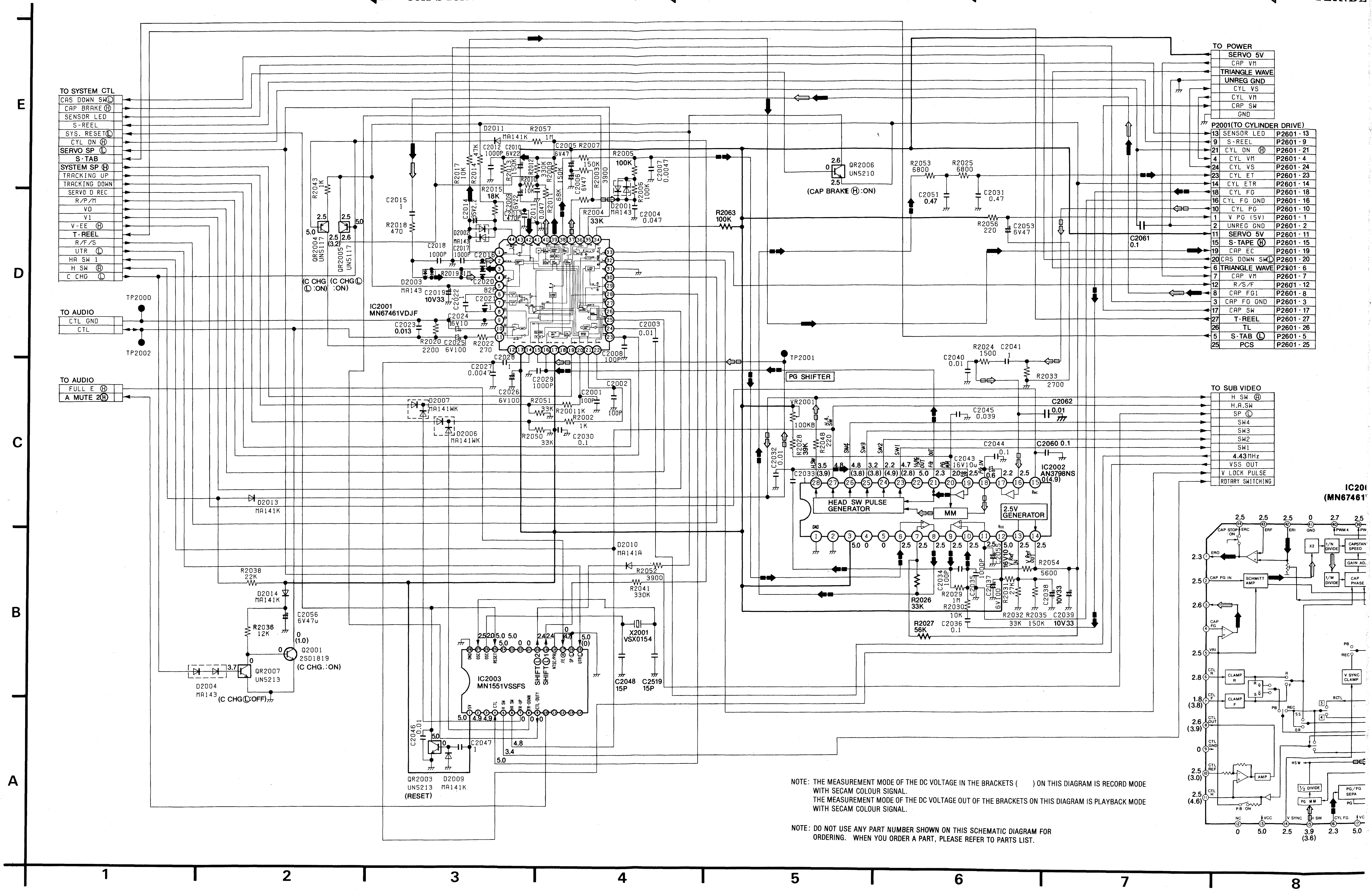
REF. NO.	IC6001																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
STOP	2.1	0.2	4.7	4.7	4.7	0	4.7	2.5	2.4	4.7	4.7	4.8	0	4.8	4.8	4.7	0.1	0	0	4.8
PLAY	0	0.3	4.7	4.7	4.7	0	4.7	2.5	2.4	4.8	4.7	4.8	0	4.8	4.8	4.7	4.8	0	0	4.8
F.F	2.4	0.3	4.7	4.7	4.7	0	4.7	2.5	2.4	4.8	4.7	4.8	4.8	4.8	4.8	4.7	0.1	0	0	4.8
REF. NO.	IC6001																			
MODE	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
STOP	4.7	0	0	4.8	0	0	5.0	4.9	4.4	0	0	0	4.7	0.5	4.7	5.0	0.8	0.8	4.6	4.6
PLAY	0	0	0	4.8	0	0	5.0	4.9	4.4	0	0	0	4.7	0.5	4.7	5.0	0.8	0.8	4.6	4.6
F.F	4.7	0	0	4.8	0	0	5.0	4.9	4.4	0.6	0	0	4.7	0.7	4.7	5.0	0.9	0.8	4.6	4.6
REF. NO.	IC6001																			
MODE	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
STOP	2.6	3.0	4.5	4.7	4.7	4.7	0.5	0.3	1.4	4.7	4.4	1.2	8.3	8.3	2.7	8.3	4.8	4.8	0	0
PLAY	4.6	4.1	4.6	4.7	4.6	4.6	0.5	0	1.4	4.7	0.1	4.4	8.7	8.7	2.7	8.7	4.8	4.8	0	0
F.F	2.6	3.0	4.5	4.7	4.7	4.7	0.5	0.3	1.4	4.7	4.4	1.2	8.3	8.3	2.7	8.3	4.8	4.8	0	0
REF. NO.	IC6001										IC6002									
MODE	61	62	63	64							1	2	3							
STOP	4.8	0	0	0							0.5	10.1	5.4							
PLAY	2.5	2.5	0	0							0.5	10.1	5.4							
F.F	4.8	2.5	0	0							0.5	10.1	5.4							
REF. NO.	IC6003																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
STOP	0	4.6	0.3	3.0	0	5.0	1.7	2.4	2.4	0	0	0	0	0	0	0	0	0	0	5.0
PLAY	0	4.6	0.3	4.7	0	5.0	1.6	2.3	2.3	0	0	0	0	0	0	0	0	0	0	5.0
F.F	0	4.6	0.3	2.8	0	5.0	1.6	2.4	2.4	0	0	0	0	0	0	0	0	0	0	5.0
REF. NO.	IC6004																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14						
STOP	0	0	0	0	0	0	0	0	0	4.8	0	0.6	0	0						
PLAY	0	0	0	0	0	0	0	0	0	4.8	0	0.6	0	0						
F.F	0	0.1	0	0	0	0	0	0	0	4.7	0	0.6	0	0						
REF. NO.	IC6005										IC6006									
MODE	1	2	3	4	5	6	7	8	9	10	1	2	3							
STOP	5.1	10.2	0	0	0	0	0	0	10.2	5.1	0	4.7	4.8							
PLAY	5.3	10.1	0	0	0	0	0	0	10.1	5.3	0	4.7	4.8							
F.F	5.1	10.2	0	0	0	0	0	0	10.2	5.1	0	4.7	4.8							
REF. NO.	IC6007																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16				
STOP	0	4.7	4.7	0	5.0	5.0	0	0	0	4.3	0	0	5.0	0	5.0	5.0				
PLAY	0	4.7	4.7	0	5.0	5.0	4.9	0	4.6	5.0	5.0	0	5.0	5.0	5.0	5.0				
F.F	0	4.7	4.7	0	5.0	5.0	0	0	0	4.7	0	0	5.0	5.0	5.0	5.0				
REF. NO.	IC6008																			
MODE	1	2	3	4	5	6	7	8												
STOP	0	4.7	2.0	0	3.6	3.1	5.0	10.1												
PLAY	2.0	4.7	2.4	0	3.5	3.1	5.0	10.1												
F.F	2.0	4.7	2.4	0	3.5	3.1	5.0	10.1												

SYSTEM CONTROL TRANSISTORs VOLTAGE CHART

REF. NO.	Q6003(A)			Q6003(B)			Q6005			Q6006			Q6007			Q6008		
MODE	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B
STOP	0	10.2	0	8.3	8.3	7.6	5.1	8.3	5.7	0	3.2	0.2	0	5.0	0	4.3	5.0	5.0
PLAY	0	10.1	0	8.7	8.7	8.0	5.3	8.7	6.0	0	4.3	0	0	0	0	0.1	5.0	0
F.F	0	10.2	0	8.3	8.3	7.6	5.1	8.3	5.7	0	3.2	0.2	0	5.0	0	4.3	5.0	5.0
REF. NO.	Q6009																	
MODE	E	C	B															
STOP	5.0	0	4.9															
PLAY	0	4.4	0															
F.F	5.0	0	4.9															
REF. NO.	QR6001			QR6002			QR6003			QR6004			QR6005			QR6006		
MODE	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B
STOP	2.2	3.6	0	0.5	2.0	0.4	0.3	4.4	0.2	0.3	4.3	2.1	5.0	0	4.8	5.0	0	4.9
PLAY	0.2	2.1	0	0.5	2.0	0.4	0.3	4.4	0.1	0.3	4.3	2.0	5.0	0	4.8	5.0	0	4.9
F.F	4.4	2.1	0	0.5	2.0	0.4	0.3	4.4	0	0.3	4.3	2.1	5.0	0	4.8	5.0	5.0	4.9
REF. NO.	QR6007			QR6008			QR6009(A)			QR6009(B)			QR6010			QR6011		
MODE	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B
STOP	4.7	4.6	5.0	0	0	4.7	0.4	0.4	1.4	5.0	0	4.8	0.4	4.3	0	4.7	2.1	0
PLAY	4.7	4.6	5.0	0	0	4.7	0.4	0.4	1.3	5.0	0	4.8	0.4	4.3	0	4.6	2.0	0
F.F	4.7	4.6	5.0	0	0	4.7	0.4	0.4	1.4	5.0	0	4.8	0.4	4.3	0	4.7	4.4	4.8
REF. NO.	QR6015			QR6016			QR6017			QR6022			QR6026					
MODE	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B			
STOP	8.3	5.7	8.3	0	0	4.7	0	0	10.5	0.5	0.4	1.7	0	0	3.4			
PLAY	8.3	6.0	8.7	0	0	4.8	0	0	10.5	0.5	0.4	1.7	0	0	3.4			
F.F	8.3	5.7	8.3	0	0	4.7	0	0	10.5	0.5	0.4	1.7	0	0	3.4			

3-24. SERVO SCHEMATIC DIAGRAM

▬ CAPSTAN SERVO SPEED LOOP. ⇦ CAPSTAN SERVO PHASE LOOP. ▬■ CYLINDER SERVO SPEED LOOP ⇦□ CYLINDE

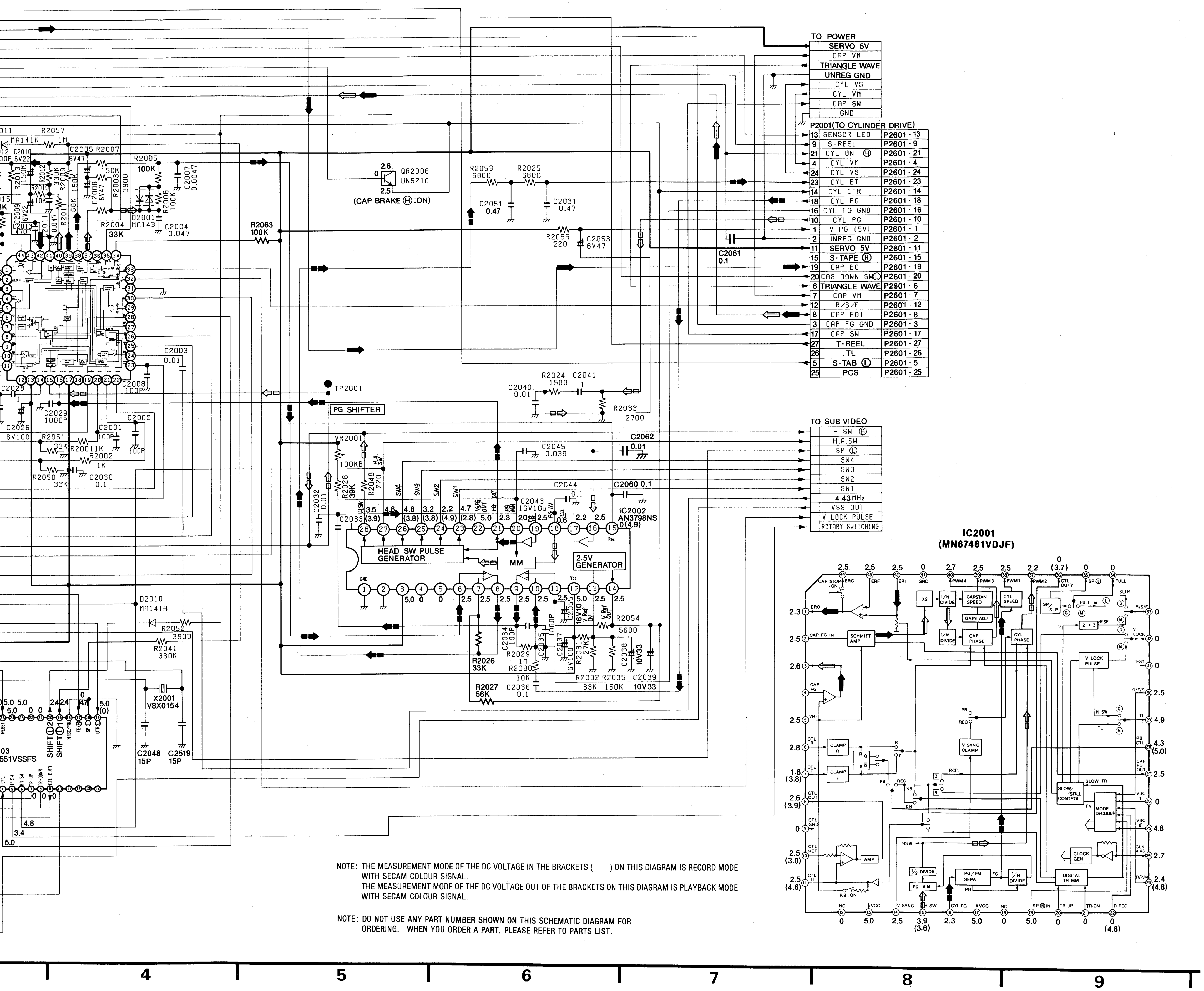


TO SYSTEM CTL
CAS DOWN SW(L)
CAP BRAKE (H)
SENSOR LED
S-REEL
SYS. RESET(L)
CYL ON (H)
SERVO SP (L)
S-TAB
SYSTEM SP (H)
TRACKING UP
TRACKING DOWN
SERVO D REC
R/P/M
VD
V1
V-EE (H)
T-REEL
R/F/S
UTR (L)
HA SW 1
H SW (H)
C CHG (L)
TO AUDIO
CTL GND
CTL
TP2000
TP2002
TO AUDIO
FULL E (H)
A MUTE 2(H)
IC2001
MN67461VDJF
IC2002
AN3798NS
IC2003
MN1551VSSFS
X2001
VSX0154
QR2001
2SD1819
(C CHG.:ON)
QR2007
UN5213
(C CHG(L):OFF)
QR2003
UN5213
(RESET)
QR2004
UN5117
QR2005
UN5117
(C CHG (L):ON)
(C CHG(L):ON)
QR2006
UN5210
(CAP BRAKE (H):ON)
TP2001
PG SHIFTER
HEAD SW PULSE GENERATOR
MM
2.5V GENERATOR
TO POWER
SERVO 5V
CAP VM
TRIANGLE WAVE
UNREG GND
CYL VS
CYL VM
CAP SW
GND
P2001(TO CYLINDER DRIVE)
13 SENSOR LED P2601·13
9 S-REEL P2601·9
21 CYL ON (H) P2601·21
4 CYL VM P2601·4
24 CYL VS P2601·24
23 CYL ET P2601·23
14 CYL ETR P2601·14
18 CYL FG P2601·18
16 CYL FG GND P2601·16
10 CYL PG P2601·10
1 V PG (5V) P2601·1
2 UNREG GND P2601·2
11 SERVO 5V P2601·11
15 S-TAPE (H) P2601·15
19 CAP EC P2601·19
20 CAS DOWN SW(L) P2601·20
6 TRIANGLE WAVE P2601·6
7 CAP VM P2601·7
12 R/S/F P2601·12
8 CAP FG1 P2601·8
3 CAP FG GND P2601·3
17 CAP SW P2601·17
27 T-REEL P2601·27
26 TL P2601·26
5 S-TAB (L) P2601·5
25 PCS P2601·25
TO SUB VIDEO
H SW (H)
H.A.SW
SP (L)
SW4
SW3
SW2
SW1
4.43MHz
VSS OUT
V LOCK PULSE
ROTARY SWITCHING
IC20
(MN67461
A
B
C
D
E
1
2
3
4
5
6
7
8

NOTE: THE MEASUREMENT MODE OF THE DC VOLTAGE IN THE BRACKETS (   ) ON THIS DIAGRAM IS RECORD MODE WITH SECAM COLOUR SIGNAL.
THE MEASUREMENT MODE OF THE DC VOLTAGE OUT OF THE BRACKETS ON THIS DIAGRAM IS PLAYBACK MODE WITH SECAM COLOUR SIGNAL.

NOTE: DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING. WHEN YOU ORDER A PART, PLEASE REFER TO PARTS LIST.

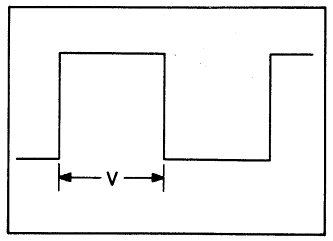
ERVO SPEED LOOP. ⇦ CAPSTAN SERVO PHASE LOOP. ◀■ CYLINDER SERVO SPEED LOOP ⇦□ CYLINDER SERVO PHASE LOOP


TO POWER
SERVO 5V
CAP VM
TRIANGLE WAVE
UNREG GND
CYL VS
CYL VM
CAP SW
GND
P2001(TO CYLINDER DRIVE)
13 SENSOR LED P2601-13
9 S-REEL P2601-9
21 CYL ON Ⓗ P2601-21
4 CYL VM P2601-4
24 CYL VS P2601-24
23 CYL ET P2601-23
14 CYL ETR P2601-14
18 CYL FG P2601-18
16 CYL FG GND P2601-16
10 CYL PG P2601-10
1 V PG (5V) P2601-1
2 UNREG GND P2601-2
11 SERVO 5V P2601-11
15 S-TAPE Ⓗ P2601-15
19 CAP EC P2601-19
20 CAS DOWN SWⓁ P2601-20
6 TRIANGLE WAVE P2601-6
7 CAP VM P2601-7
12 R/S/F P2601-12
8 CAP FG1 P2601-8
3 CAP FG GND P2601-3
17 CAP SW P2601-17
27 T-REEL P2601-27
26 TL P2601-26
5 S-TAB Ⓛ P2601-5
25 PCS P2601-25
TO SUB VIDEO
H SW Ⓐ
H.A.SW
SP Ⓛ
SW4
SW3
SW2
SW1
4.43MHz
VSS OUT
V LOCK PULSE
ROTARY SWITCHING
QR2006 UN5210
(CAP BRAKE Ⓗ:ON)
TP2001
PG SHIFTER
IC2002 AN3798NS
HEAD SW PULSE GENERATOR
MM
2.5V GENERATOR
X2001 VSX0154
D2010 MA141A
IC2001 (MN67461VDJF)
CAPSTAN SPEED
CYL SPEED
GAIN ADJ
CAP PHASE
CYL PHASE
SCHMITT AMP
V LOCK PULSE
V SYNC CLAMP
CLAMP R
CLAMP F
SLOW/STILL CONTROL
MODE DECODER
CLOCK GEN.
DIGITAL TR MM
PG/FG SEPA
1/2 DIVIDE
PG MM
AMP
4
5
6
7
8
9

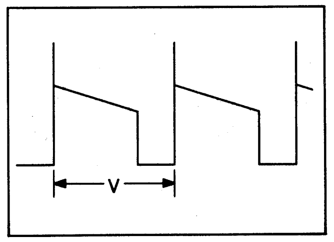
NOTE: THE MEASUREMENT MODE OF THE DC VOLTAGE IN THE BRACKETS (　　) ON THIS DIAGRAM IS RECORD MODE WITH SECAM COLOUR SIGNAL.
THE MEASUREMENT MODE OF THE DC VOLTAGE OUT OF THE BRACKETS ON THIS DIAGRAM IS PLAYBACK MODE WITH SECAM COLOUR SIGNAL.

NOTE: DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING. WHEN YOU ORDER A PART, PLEASE REFER TO PARTS LIST.

SERVO CIRCUIT TP (Test Point)
WAVEFORM (REF. NO. 2000 Series)



TP2001 REC/PLAY
2.0V/10msec. div. 4.0Vp-p

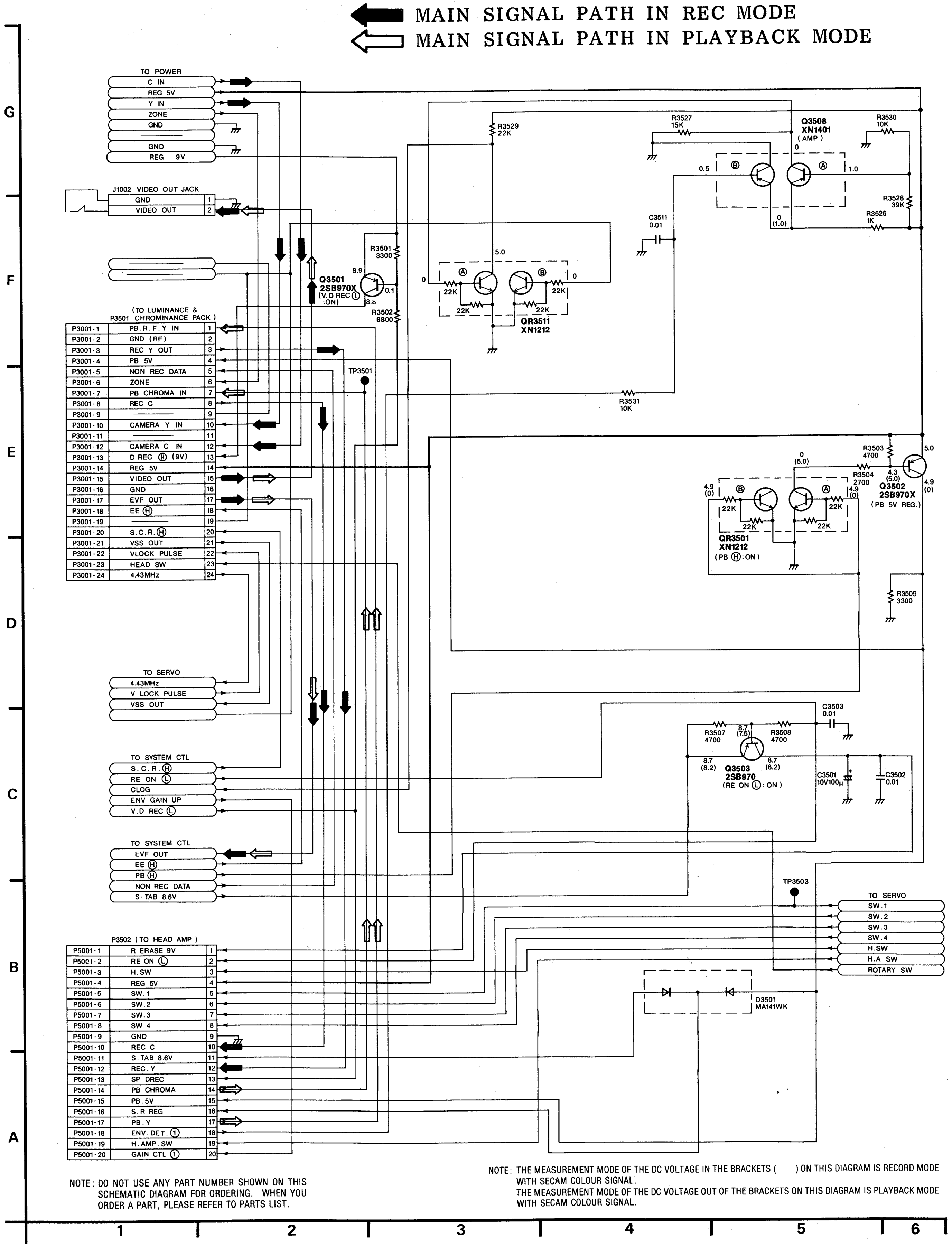


TP2002 REC
5.0V/10msec. div. 3.2Vp-p

Next Page:
SUB VIDEO & AUDIO Section

3-25. SUB VIDEO SCHEMATIC DIAGRAM

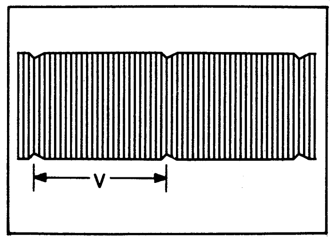
MAIN SIGNAL PATH IN REC MODE
MAIN SIGNAL PATH IN PLAYBACK MODE


G
F
E
D
C
B
A
1
2
3
4
5
6
TO POWER
C IN
REG 5V
Y IN
ZONE
GND
GND
REG 9V
J1002 VIDEO OUT JACK
GND 1
VIDEO OUT 2
(TO LUMINANCE & P3501 CHROMINANCE PACK)
P3001-1 PB.R.F.Y IN 1
P3001-2 GND (RF) 2
P3001-3 REC Y OUT 3
P3001-4 PB 5V 4
P3001-5 NON REC DATA 5
P3001-6 ZONE 6
P3001-7 PB CHROMA IN 7
P3001-8 REC C 8
P3001-9 9
P3001-10 CAMERA Y IN 10
P3001-11 11
P3001-12 CAMERA C IN 12
P3001-13 D REC Ⓗ (9V) 13
P3001-14 REG 5V 14
P3001-15 VIDEO OUT 15
P3001-16 GND 16
P3001-17 EVF OUT 17
P3001-18 EE Ⓗ 18
P3001-19 19
P3001-20 S.C.R.Ⓗ 20
P3001-21 VSS OUT 21
P3001-22 VLOCK PULSE 22
P3001-23 HEAD SW 23
P3001-24 4.43MHz 24
TO SERVO
4.43MHz
V LOCK PULSE
VSS OUT
TO SYSTEM CTL
S.C.R.Ⓗ
RE ON Ⓛ
CLOG
ENV GAIN UP
V.D REC Ⓛ
TO SYSTEM CTL
EVF OUT
EE Ⓗ
PB Ⓗ
NON REC DATA
S-TAB 8.6V
P3502 (TO HEAD AMP)
P5001-1 R ERASE 9V 1
P5001-2 RE ON Ⓛ 2
P5001-3 H.SW 3
P5001-4 REG 5V 4
P5001-5 SW.1 5
P5001-6 SW.2 6
P5001-7 SW.3 7
P5001-8 SW.4 8
P5001-9 GND 9
P5001-10 REC C 10
P5001-11 S.TAB 8.6V 11
P5001-12 REC.Y 12
P5001-13 SP DREC 13
P5001-14 PB CHROMA 14
P5001-15 PB.5V 15
P5001-16 S.R REG 16
P5001-17 PB.Y 17
P5001-18 ENV.DET.Ⓛ 18
P5001-19 H.AMP.SW 19
P5001-20 GAIN CTL Ⓛ 20
TO SERVO
SW.1
SW.2
SW.3
SW.4
H.SW
H.A SW
ROTARY SW
Q3501 2SB970X (V.D REC Ⓛ :ON)
R3501 3300
R3502 6800
TP3501
R3529 22K
R3527 15K
Q3508 XN1401 (AMP)
R3530 10K
R3528 39K
R3526 1K
C3511 0.01
QR3511 XN1212
R3531 10K
R3503 4700
R3504 2700
Q3502 2SB970X (PB 5V REG.)
QR3501 XN1212 (PB Ⓗ:ON)
R3505 3300
R3507 4700
R3506 4700
Q3503 2SB970 (RE ON Ⓛ:ON)
C3503 0.01
C3501 10V100μ
C3502 0.01
TP3503
D3501 MA141WK

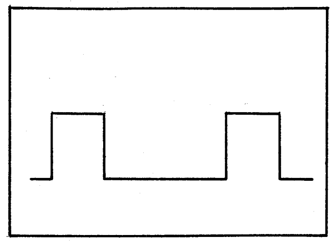
NOTE: DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING. WHEN YOU ORDER A PART, PLEASE REFER TO PARTS LIST.

NOTE: THE MEASUREMENT MODE OF THE DC VOLTAGE IN THE BRACKETS ( ) ON THIS DIAGRAM IS RECORD MODE WITH SECAM COLOUR SIGNAL.
THE MEASUREMENT MODE OF THE DC VOLTAGE OUT OF THE BRACKETS ON THIS DIAGRAM IS PLAYBACK MODE WITH SECAM COLOUR SIGNAL.

SUB VIDEO CIRCUIT TP (Test Point) WAVEFORM (REF. NO. 3500 Series)



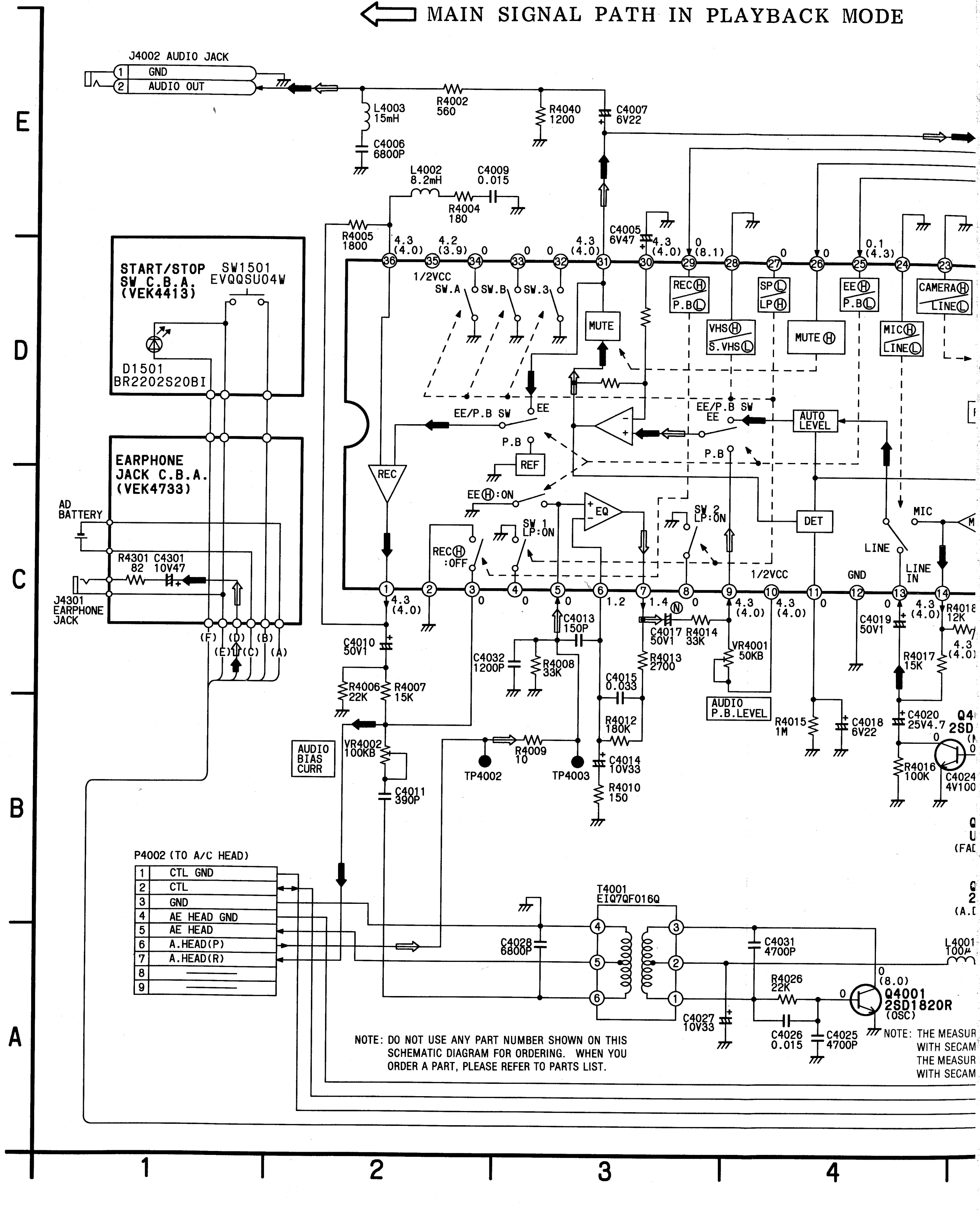
TP3501 PLAY
0.1V/10msec. div. 0.25Vp-p



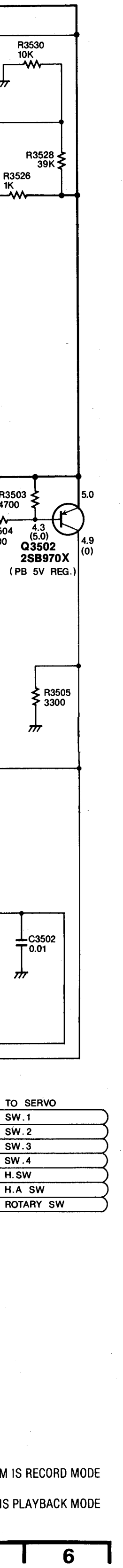
TP3503 REC/PLAY
0.5V/20μsec. div. 5.0Vp-p

3-26. AUDIO SCHEMATIC DIAGRAM

MAIN SIGNAL PATH IN REC MODE
MAIN SIGNAL PATH IN PLAYBACK MODE

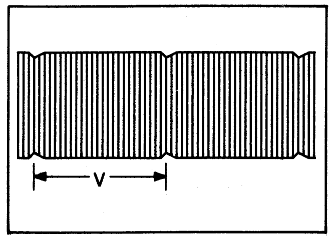

E
D
C
B
A
1
2
3
4
J4002 AUDIO JACK
1 GND
2 AUDIO OUT
L4003 15mH
R4002 560
R4040 1200
C4007 6V22
C4006 6800P
L4002 8.2mH
C4009 0.015
R4004 180
R4005 1800
C4005 6V47
START/STOP SW C.B.A. (VEK4413)
SW1501 EVQQSU04W
D1501 BR2202S20BI
EARPHONE JACK C.B.A. (VEK4733)
AD BATTERY
R4301 82
C4301 10V47
J4301 EARPHONE JACK
1/2VCC
SW.A
SW.B
SW.3
MUTE
REC Ⓗ
P.B Ⓛ
SP Ⓛ
LP Ⓗ
VHS Ⓗ
S.VHS Ⓛ
MUTE Ⓗ
EE Ⓗ
P.B Ⓛ
CAMERA Ⓗ
LINE Ⓛ
MIC Ⓗ
LINE Ⓛ
EE/P.B SW
EE
P.B
REF
AUTO LEVEL
REC
EE Ⓗ:ON
EQ
SW 1 LP:ON
SW 2 LP:ON
REC Ⓗ :OFF
DET
MIC
LINE
GND
LINE IN
C4010 50V1
R4006 22K
R4007 15K
C4032 1200P
R4008 33K
C4013 150P
C4017 50V1
R4014 33K
R4013 2700
VR4001 50KB
AUDIO P.B.LEVEL
C4015 0.033
R4012 180K
C4014 10V33
R4010 150
TP4002
TP4003
R4009 10
AUDIO BIAS CURR
VR4002 100KB
C4011 390P
C4019 50V1
R4018 12K
R4017 15K
R4015 1M
C4018 6V22
C4020 25V4.7
R4016 100K
P4002 (TO A/C HEAD)
1 CTL GND
2 CTL
3 GND
4 AE HEAD GND
5 AE HEAD
6 A.HEAD(P)
7 A.HEAD(R)
8
9
T4001 EI070F016Q
C4028 6800P
C4031 4700P
R4026 22K
C4027 10V33
C4026 0.015
C4025 4700P
Q4001 2SD1820R (OSC)
NOTE: THE MEASUR
WITH SECAM
THE MEASUR
WITH SECAM

NOTE: DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING. WHEN YOU ORDER A PART, PLEASE REFER TO PARTS LIST.

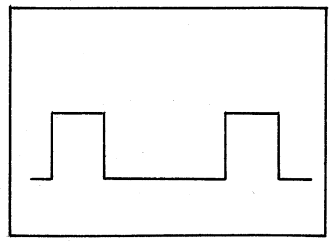

R3530
10K
R3528
39K
R3526
1K
R3503
4700
Q3502
2SB970X
(PB 5V REG.)
R3505
3300
C3502
0.01
TO SERVO
SW.1
SW.2
SW.3
SW.4
H.SW
H.A SW
ROTARY SW
M IS RECORD MODE
S PLAYBACK MODE
6

3-26. AUDIO SCHEMATIC DIAGRAM

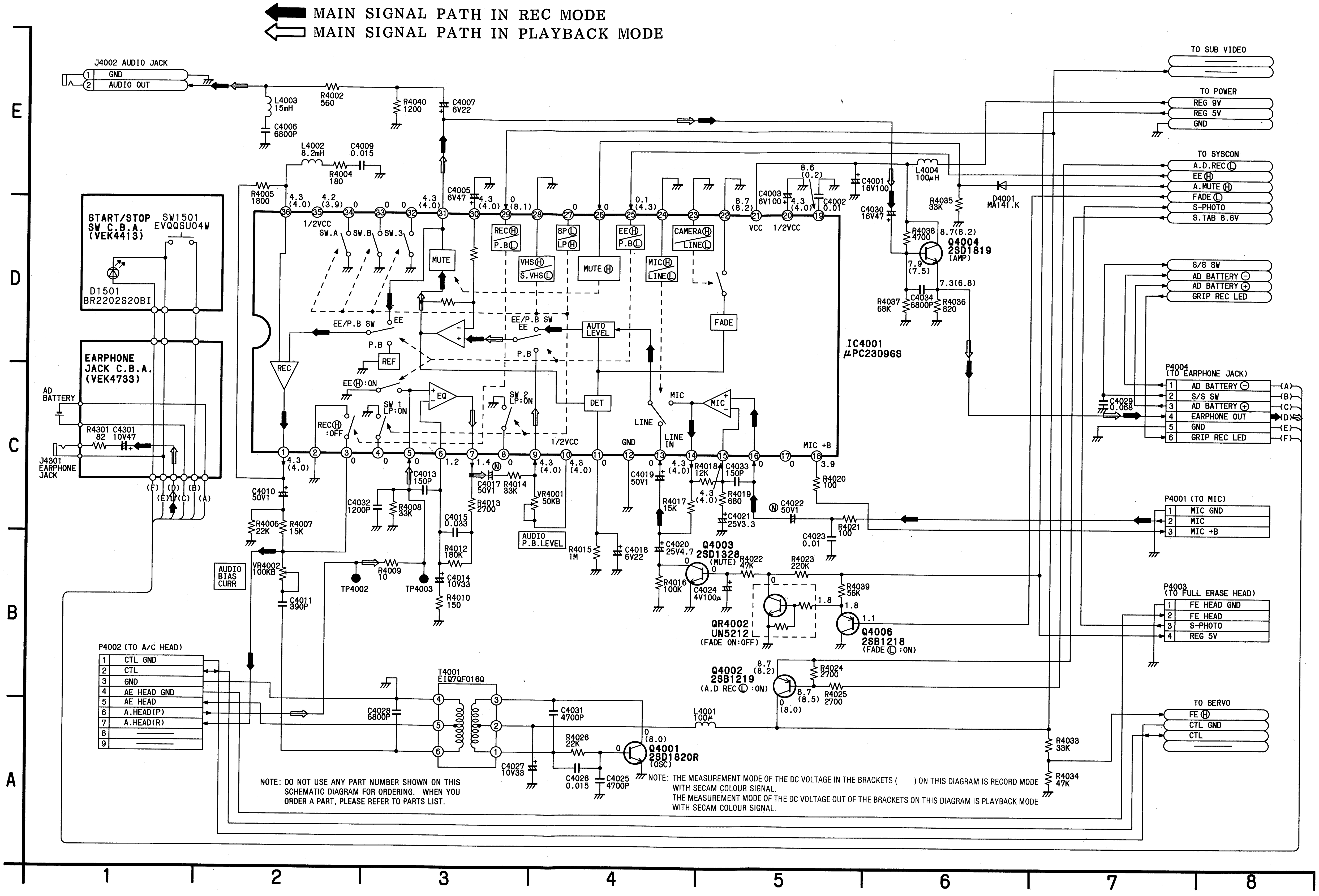
SUB VIDEO CIRCUIT TP (Test Point) WAVEFORM (REF. NO. 3500 Series)



TP3501 PLAY
0.1V/10msec. div. 0.25Vp-p



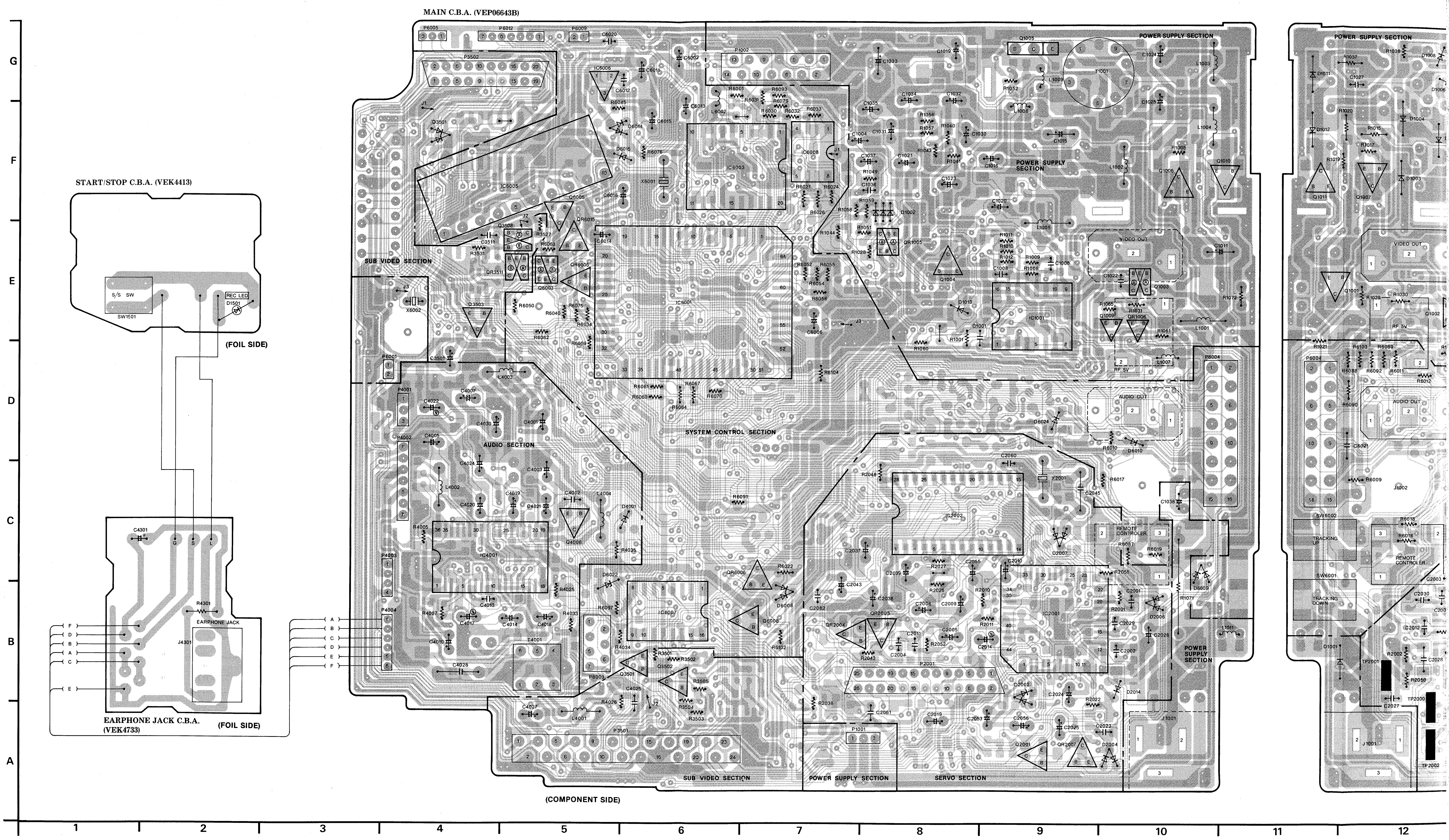
TP3503 REC/PLAY
0.5V/20µsec. div. 5.0Vp-p


MAIN SIGNAL PATH IN REC MODE
MAIN SIGNAL PATH IN PLAYBACK MODE
J4002 AUDIO JACK
GND
AUDIO OUT
L4003 15mH
R4002 560
R4040 1200
C4007 6V22
C4006 6800P
L4002 8.2mH
C4009 0.015
R4004 180
R4005 1800
START/STOP SW C.B.A. (VEK4413)
SW1501 EVQQSU04W
D1501 BR2202S20BI
EARPHONE JACK C.B.A. (VEK4733)
AD BATTERY
R4301 82
C4301 10V47
J4301 EARPHONE JACK
1/2VCC
SW.A
SW.B
SW.3
MUTE
REC(H)
P.B(L)
VHS(H)
S.VHS(L)
SP(L)
LP(H)
MUTE(H)
EE(H)
P.B(L)
MIC(H)
LINE(L)
CAMERA(H)
LINE(L)
VCC
1/2VCC
EE/P.B SW
EE
P.B
REF
AUTO LEVEL
FADE
REC
EE(H):ON
EQ
SW 1 LP:ON
SW 2 LP:ON
REC(H):OFF
DET
MIC
LINE
LINE IN
GND
MIC +B
IC4001
µPC2309GS
C4005 6V47
C4003 6V100
C4001 16V100
C4002 0.01
C4030 16V47
L4004 100µH
R4035 33K
D4001 MA141.K
R4038 4700
Q4004 2SD1819 (AMP)
R4037 68K
C4034 6800P
R4036 820
C4010 50V1
R4006 22K
R4007 15K
C4032 1200P
R4008 33K
C4013 150P
C4015 0.033
R4012 180K
C4017 50V1
R4014 33K
R4013 2700
VR4001 50KB
AUDIO P.B.LEVEL
R4015 1M
C4018 6V22
C4019 50V1
R4018 12K
C4033 150P
R4019 680
R4017 15K
C4021 25V3.3
C4022 50V1
R4020 100
R4021 100
C4023 0.01
C4020 25V4.7
Q4003 2SD1328 (MUTE)
R4022 47K
R4023 220K
R4016 100K
C4024 4V100µ
R4039 56K
QR4002 UN5212 (FADE ON:OFF)
Q4006 2SB1218 (FADE (L):ON)
AUDIO BIAS CURR
VR4002 100KB
C4011 390P
R4009 10
TP4002
TP4003
C4014 10V33
R4010 150
P4002 (TO A/C HEAD)
1 CTL GND
2 CTL
3 GND
4 AE HEAD GND
5 AE HEAD
6 A.HEAD(P)
7 A.HEAD(R)
8
9
C4028 6800P
T4001 EI07QF016Q
C4027 10V33
C4031 4700P
R4026 22K
C4026 0.015
C4025 4700P
Q4001 2SD1820R (OSC)
L4001 100µ
Q4002 2SB1219 (A.D REC (L):ON)
R4024 2700
R4025 2700
R4033 33K
R4034 47K
TO SUB VIDEO
TO POWER
REG 9V
REG 5V
GND
TO SYSCON
A.D.REC(L)
EE(H)
A.MUTE(H)
FADE(L)
S-PHOTO
S.TAB 8.6V
S/S SW
AD BATTERY ⊖
AD BATTERY ⊕
GRIP REC LED
P4004 (TO EARPHONE JACK)
1 AD BATTERY ⊖
2 S/S SW
3 AD BATTERY ⊕
4 EARPHONE OUT
5 GND
6 GRIP REC LED
C4029 0.068
P4001 (TO MIC)
1 MIC GND
2 MIC
3 MIC +B
P4003 (TO FULL ERASE HEAD)
1 FE HEAD GND
2 FE HEAD
3 S-PHOTO
4 REG 5V
TO SERVO
FE(H)
CTL GND
CTL
E
D
C
B
A
1
2
3
4
5
6
7
8

NOTE: DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING. WHEN YOU ORDER A PART, PLEASE REFER TO PARTS LIST.

NOTE: THE MEASUREMENT MODE OF THE DC VOLTAGE IN THE BRACKETS ( ) ON THIS DIAGRAM IS RECORD MODE WITH SECAM COLOUR SIGNAL.
THE MEASUREMENT MODE OF THE DC VOLTAGE OUT OF THE BRACKETS ON THIS DIAGRAM IS PLAYBACK MODE WITH SECAM COLOUR SIGNAL.

3-27. MAIN C.B.A. [POWER SUPPLY, SERVO, SUB VIDEO, AUDIO, SYSTEM CONTROL Section] (VEP06643B)


MAIN C.B.A. (VEP06643B)
START/STOP C.B.A. (VEK4413)
S/S SW
SW1501
REC LED
D1501
(FOIL SIDE)
EARPHONE JACK C.B.A.
(VEK4733)
(FOIL SIDE)
EARPHONE JACK
J4301
R4301
C4301
(COMPONENT SIDE)
POWER SUPPLY SECTION
SUB VIDEO SECTION
AUDIO SECTION
SYSTEM CONTROL SECTION
SERVO SECTION
VIDEO OUT
AUDIO OUT
REMOTE CONTROLER
TRACKING UP
TRACKING DOWN
SW6001
SW6002
RF 5V
IC6001
IC6003
IC6005
IC6006
IC6007
IC6008
IC4001
IC1001
IC2001
IC2002
T1001
T4001
J1001
P1001
P1002
P2001
P3501
P3502
P4001
P4002
P4003
P4004
P6001
P6003
P6004
P6005
P6009
P6012
X2001
X6001
X6002
TP2000
TP2001
TP2002
G
F
E
D
C
B
A
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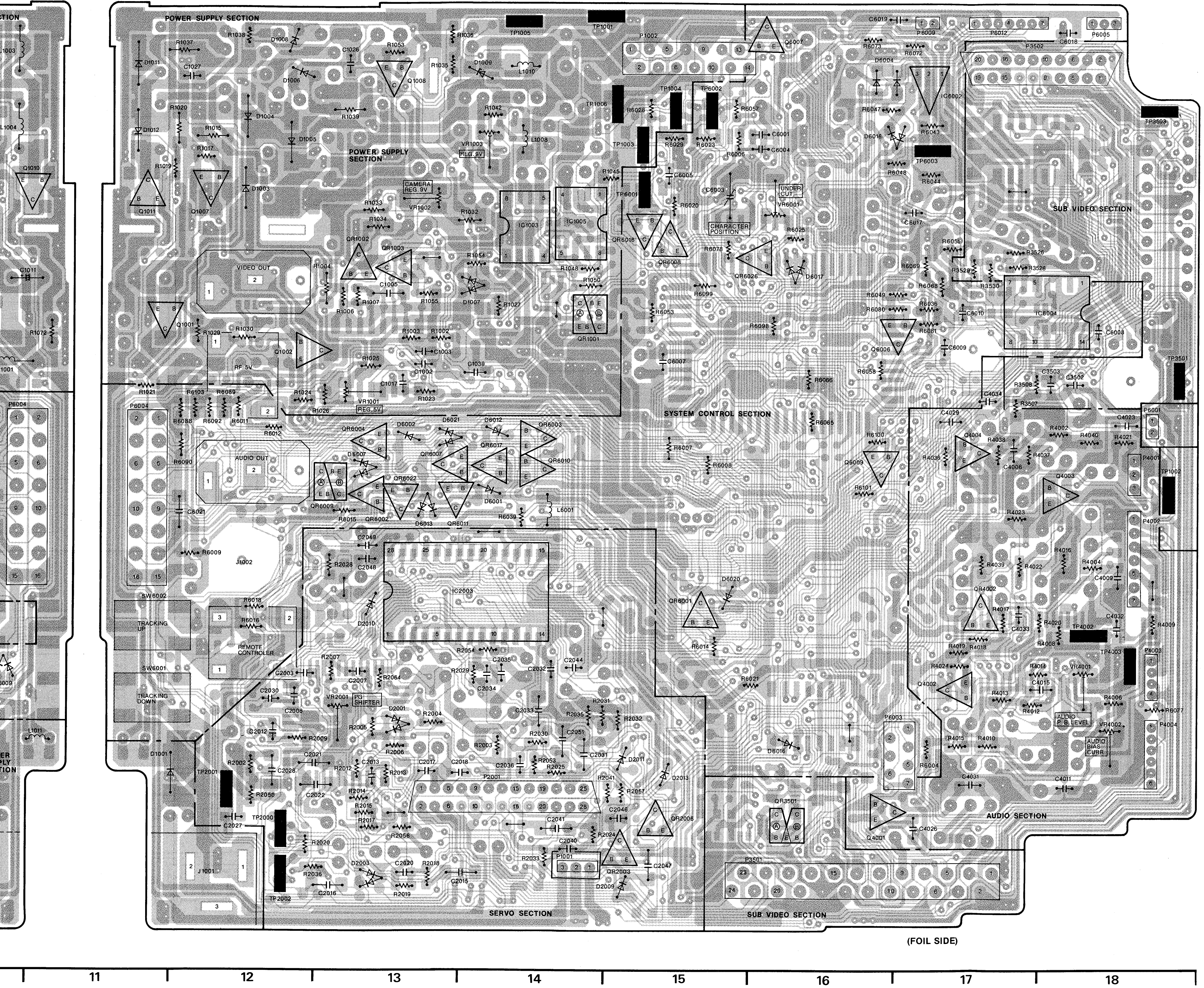
MAIN C.B.A. (VEP06643B)


POWER SUPPLY SECTION
POWER SUPPLY SECTION
SUB VIDEO SECTION
SYSTEM CONTROL SECTION
AUDIO SECTION
SERVO SECTION
SUB VIDEO SECTION
VIDEO OUT
AUDIO OUT
CAMERA REG. 9V
REG. 9V
REG. 5V
RF 5V
CHARACTER POSITION
UNDER CUT
TRACKING UP
TRACKING DOWN
REMOTE CONTROLER
PG SHIFTER
AUDIO P. B. LEVEL
AUDIO BIAS CURR
11
12
13
14
15
16
17
18

(FOIL SIDE)

SYSTEM CONTROL Section	
Transistor	
Q6003	E-5 Ⓒ
Q6005	F-5 Ⓒ
Q6006	E-16 Ⓕ
Q6007	G-16 Ⓕ
Q6008	B-7 Ⓒ
Q6009	D-16 Ⓕ
Transistor & Resistor	
QR6001	C-15 Ⓕ
QR6002	D-13 Ⓕ
QR6003	D-14 Ⓕ
QR6004	D-13 Ⓕ
QR6005	E-5 Ⓒ
QR6006	C-6 Ⓒ
QR6007	D-13 Ⓕ
QR6008	E-15 Ⓕ
QR6009	D-13 Ⓕ
QR6010	D-14 Ⓕ
QR6011	D-13 Ⓕ
QR6015	F-5 Ⓒ
QR6016	E-15 Ⓕ
QR6017	D-14 Ⓕ
QR6022	D-13 Ⓕ
QR6026	E-15 Ⓕ
Integrated Circuit	
IC6001	E-6 Ⓒ
IC6002	G-17 Ⓕ
IC6003	F-6 Ⓒ
IC6004	E-18 Ⓕ
IC6005	F-5 Ⓒ
IC6006	G-5 Ⓒ
IC6007	B-6 Ⓒ
IC6008	F-7 Ⓒ
Test Point	
TP6001	F-15 Ⓕ
TP6002	F-15 Ⓕ
TP6003	F-17 Ⓕ
Adjustment	
C6003	F-15 Ⓕ
VR6001	F-16 Ⓕ
Connector	
P6001	D-18 Ⓕ
P6001	D-4 Ⓒ
P6003	B-17 Ⓕ
P6003	B-5 Ⓒ
P6004	D-10 Ⓒ
P6004	D-11 Ⓕ
P6005	G-18 Ⓕ
P6005	G-4 Ⓒ
P6009	G-17 Ⓕ
P6009	G-5 Ⓒ
P6012	G-17 Ⓕ
P6012	G-5 Ⓒ

ADDRESS INFORMATION
Ⓒ...COMPONENT SIDE
Ⓕ...FOIL SIDE

POWER SUPPLY Section	
Transistor	
Q1001	E-12 Ⓕ
Q1002	E-12 Ⓕ
Q1003	E-10 Ⓒ
Q1004	E-8 Ⓒ
Q1005	G-9 Ⓒ
Q1006	F-10 Ⓒ
Q1007	F-12 Ⓕ
Q1008	G-13 Ⓕ
Q1009	E-10 Ⓒ
Q1010	F-11 Ⓒ
Q1011	F-11 Ⓕ
Transistor & Resistor	
QR1001	E-14 Ⓕ
QR1002	E-13 Ⓕ
QR1003	E-13 Ⓕ
QR1005	E-8 Ⓒ
QR1006	E-10 Ⓒ
Integrated Circuit	
IC1001	E-9 Ⓒ
IC1003	F-14 Ⓕ
IC1005	F-14 Ⓕ
Test Point	
TP1001	G-14 Ⓕ
TP1002	D-18 Ⓕ
TP1003	F-15 Ⓕ
TP1004	F-15 Ⓕ
TP1005	G-14 Ⓕ
TP1006	F-14 Ⓕ
Adjustment	
VR1001	D-13 Ⓕ
VR1002	F-13 Ⓕ
VR1003	F-14 Ⓕ
Connector	
P1001	A-14 Ⓕ
P1001	A-8 Ⓒ
P1002	G-15 Ⓕ
P1002	G-6 Ⓒ

ADDRESS INFORMATION
Ⓒ...COMPONENT SIDE
Ⓕ...FOIL SIDE

SERVO Section	
Transistor	
Q2001	A-9 Ⓒ
Transistor & Resistor	
QR2003	A-15 Ⓕ
QR2004	B-7 Ⓒ
QR2005	B-8 Ⓒ
QR2006	B-15 Ⓕ
QR2007	A-9 Ⓒ
Integrated Circuit	
IC2001	B-9 Ⓒ
IC2002	C-8 Ⓒ
IC2003	C-14 Ⓕ
Test Point	
TP2000	B-12 Ⓕ
TP2001	B-12 Ⓕ
TP2002	A-12 Ⓕ
Adjustment	
VR2001	B-13 Ⓕ
Connector	
P2001	B-14 Ⓕ
P2001	B-8 Ⓒ

ADDRESS INFORMATION
Ⓒ...COMPONENT SIDE
Ⓕ...FOIL SIDE

SUB VIDEO Section	
Transistor	
Q3501	B-6 Ⓒ
Q3502	B-6 Ⓒ
Q3503	E-4 Ⓒ
Q3508	E-5 Ⓒ
Transistor & Resistor	
QR3501	B-16 Ⓕ
QR3511	E-5 Ⓒ
Test Point	
TP3501	E-18 Ⓕ
TP3503	F-18 Ⓕ
Connector	
P3501	A-16 Ⓕ
P3501	A-6 Ⓒ
P3502	G-17 Ⓕ
P3502	G-4 Ⓒ

ADDRESS INFORMATION
Ⓒ...COMPONENT SIDE
Ⓕ...FOIL SIDE

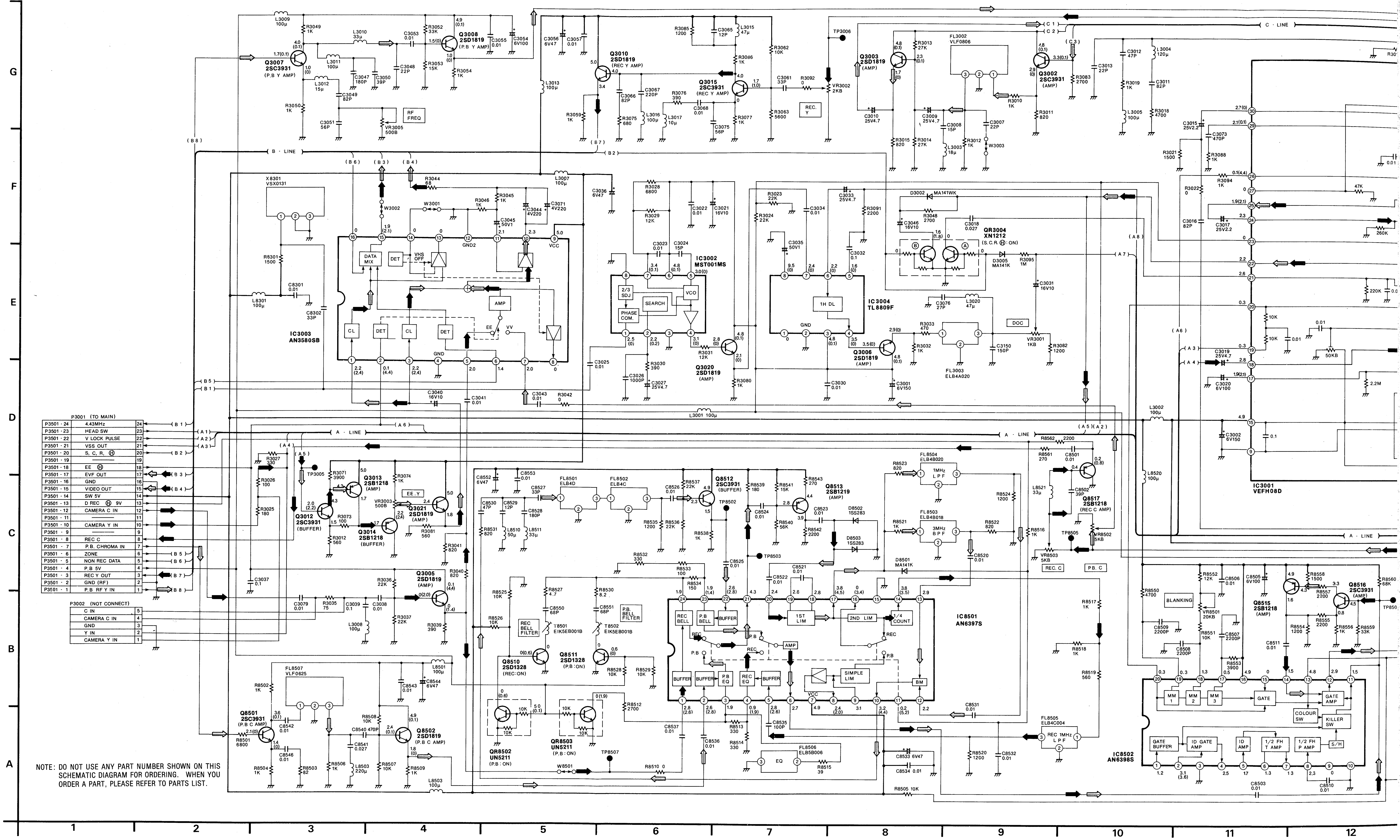
AUDIO Section	
Transistor	
Q4001	A-16 Ⓕ
Q4002	B-17 Ⓕ
Q4003	D-18 Ⓕ
Q4004	D-17 Ⓕ
Q4006	C-5 Ⓒ
Transistor & Resistor	
QR4002	C-17 Ⓕ
Integrated Circuit	
IC4001	C-4 Ⓒ
Test Point	
TP4002	C-18 Ⓕ
TP4003	C-18 Ⓕ
Adjustment	
VR4001	C-18 Ⓕ
VR4002	B-18 Ⓕ
Connector	
P4001	D-18 Ⓕ
P4001	D-4 Ⓒ
P4002	D-18 Ⓕ
P4002	D-4 Ⓒ
P4003	C-18 Ⓕ
P4003	C-4 Ⓒ
P4004	B-18 Ⓕ
P4004	B-4 Ⓒ
J4301	B-2

ADDRESS INFORMATION
Ⓒ...COMPONENT SIDE
Ⓕ...FOIL SIDE

3-28. LUMINANCE & CHROMINANCE PACK SCHEMATIC DIAGRAM

MAIN SIGNAL PATH IN REC MODE

MAIN SIGNAL PATH IN PLAYBACK MODE

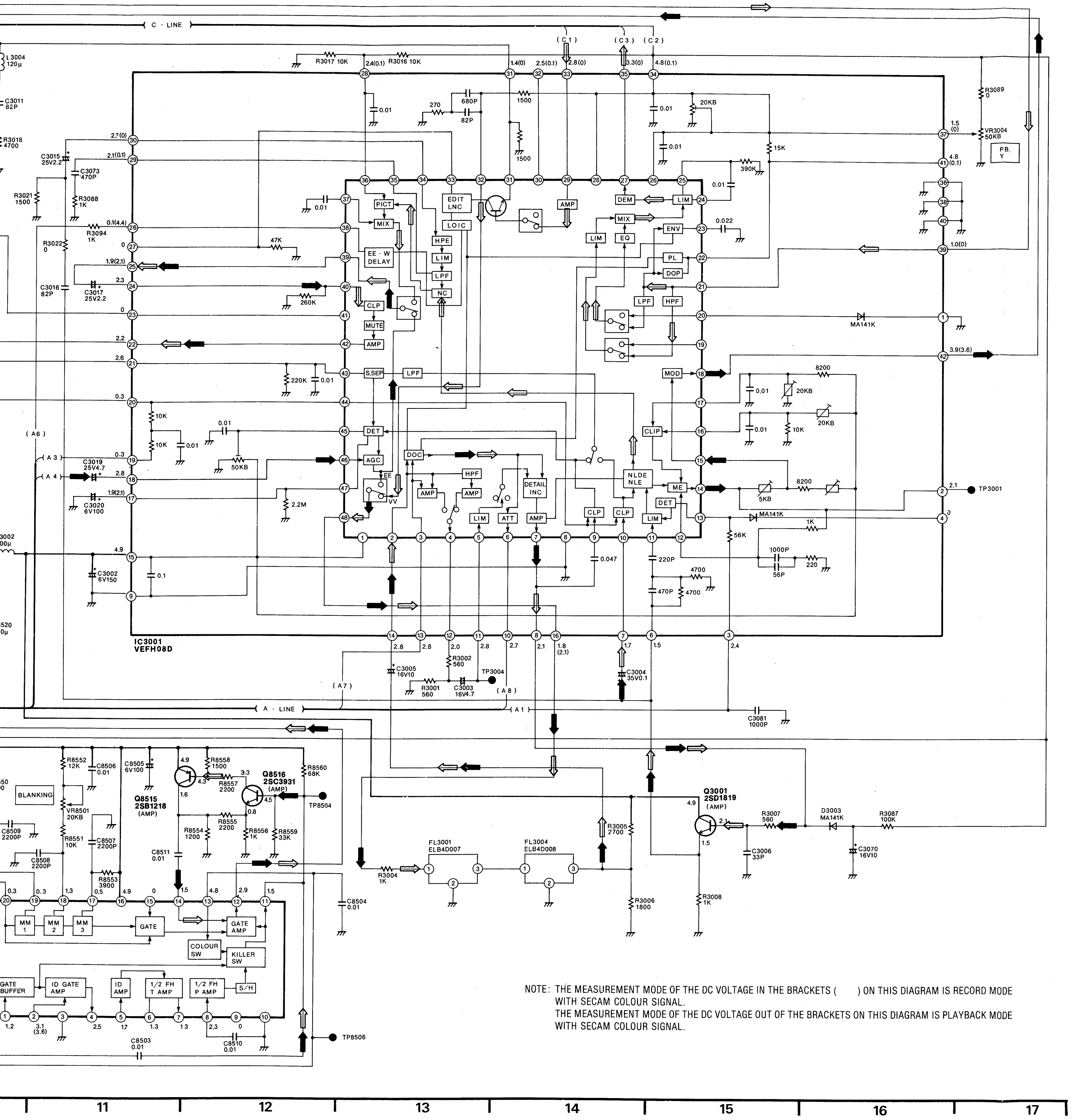


P3001 (TO MAIN)
P3501 - 24 4.43MHz 24
P3501 - 23 HEAD SW 23
P3501 - 22 V LOCK PULSE 22
P3501 - 21 VSS OUT 21
P3501 - 20 S, C, R, Ⓗ 20
P3501 - 19 19
P3501 - 18 EE Ⓗ 18
P3501 - 17 EVF OUT 17
P3501 - 16 GND 16
P3501 - 15 VIDEO OUT 15
P3501 - 14 SW 5V 14
P3501 - 13 D REC Ⓗ 9V 13
P3501 - 12 CAMERA C IN 12
P3501 - 11 11
P3501 - 10 CAMERA Y IN 10
P3501 - 9 9
P3501 - 8 REC C 8
P3501 - 7 P.B. CHROMA IN 7
P3501 - 6 ZONE 6
P3501 - 5 NON REC DATA 5
P3501 - 4 P.B 5V 4
P3501 - 3 REC Y OUT 3
P3501 - 2 GND (RF) 2
P3501 - 1 P.B RF Y IN 1
P3002 (NOT CONNECT)
C IN 5
CAMERA C IN 4
GND 3
Y IN 2
CAMERA Y IN 1
B - LINE
A - LINE
C - LINE
Q3007 2SC3931 (P.B Y AMP)
Q3008 2SD1819 (P.B Y AMP)
Q3010 2SD1819 (REC Y AMP)
Q3015 2SC3931 (REC Y AMP)
Q3003 2SD1819 (AMP)
Q3002 2SC3931 (AMP)
RF FREQ
REC. Y
X8301 VSX0131
IC3003 AN3580SB
DATA MIX
DET
VHS OFF
AMP
CL
EE
VV
GND
VCC
IC3002 MST001MS
2/3 SDJ
PHASE COM.
SEARCH
VCO
Q3020 2SD1819 (AMP)
IC3004 TL8809F
1H DL
Q3006 2SD1819 (AMP)
QR3004 XN1212 (S.C.R. Ⓗ: ON)
D3002 MA141WK
D3005 MA141K
FL3002 VLF0806
FL3003 ELB4A020
DOC
L3001 100µ
IC3001 VEFH08D
Q3013 2SB1218 (AMP)
Q3012 2SC3931 (BUFFER)
Q3014 2SB1218 (BUFFER)
Q3021 2SD1819 (AMP)
EE.Y
Q3005 2SD1819 (AMP)
TP3005
TP3006
Q8501 2SC3931 (P.B C AMP)
Q8502 2SD1819 (P.B C AMP)
FL8507 VLF0625
FL8501 ELB4D
FL8502 ELB4C
REC BELL FILTER
P.B BELL FILTER
T8501 EIK5EB001B
T8502 EIK5EB001B
Q8510 2SD1328 (REC:ON)
Q8511 2SD1328 (P.B :ON)
QR8502 UN5211 (P.B : ON)
QR8503 UN5211 (P.B : ON)
Q8512 2SC3931 (BUFFER)
Q8513 2SB1219 (AMP)
D8502 1SS283
D8503 1SS283
D8501 MA141K
FL8504 ELB4B020
1MHz LPF
FL8503 ELB4B018
3MHz BPF
FL8506 ELB5B006
EQ
IC8501 AN6397S
REC BELL
P.B BELL
BUFFER
1ST LIM
2ND LIM
1/4 COUNT
SIMPLE LIM
BM
REC EQ
P.B EQ
FL8505 ELB4C004
REC 1MHz LPF
Q8517 2SB1218 (REC C AMP)
REC. C
PB. C
Q8515 2SB1218 (AMP)
Q8516 2SC3931 (AMP)
BLANKING
IC8502 AN6398S
MM 1
MM 2
MM 3
GATE
GATE AMP
COLOUR SW
KILLER SW
GATE BUFFER
ID GATE AMP
ID AMP
1/2 FH T AMP
1/2 FH P AMP
S/H
TP8502
TP8503
TP8505
TP8507
W8501
1 2 3 4 5 6 7 8 9 10 11 12
G F E D C B A

NOTE: DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING. WHEN YOU ORDER A PART, PLEASE REFER TO PARTS LIST.

Back Page:
MAIN C.B.A. Section

PATH IN PLAYBACK MODE


C · LINE
A · LINE
IC3001
VEFH08D
(C1)
(C3)
(C2)
PICT
MIX
EE · W DELAY
CLP
MUTE
AMP
S.SEP
LPF
DET
AGC
VV
EDIT LNC
LOIC
HPE
LIM
LPF
NC
AMP
DEM
LIM
MIX
ENV
LIM
EQ
PL
DOP
LPF
HPF
MOD
CLIP
NLDE NLE
ME
DET
LIM
DOC
HPF
AMP
AMP
DETAIL INC
LIM
ATT
AMP
CLP
CLP
TP3001
TP3004
TP8504
TP8506
Q3001 2SD1819 (AMP)
Q8515 2SB1218 (AMP)
Q8516 2SC3931 (AMP)
FL3001 ELB4D007
FL3004 ELB4D008
D3003 MA141K
MA141K
BLANKING
MM 1
MM 2
MM 3
GATE
GATE AMP
COLOUR SW
KILLER SW
GATE BUFFER
ID GATE AMP
ID AMP
1/2 FH T AMP
1/2 FH P AMP
S/H
PB. Y
VR3004 50KB
(A1)
(A3)
(A4)
(A6)
(A7)
(A8)
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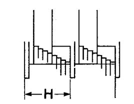
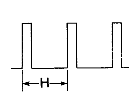
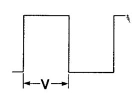
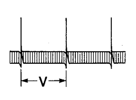
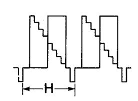
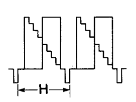
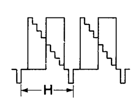
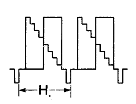
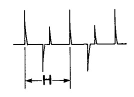
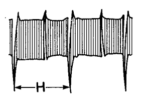
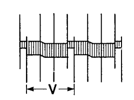
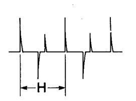
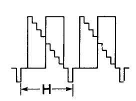
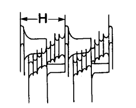
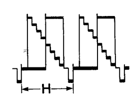
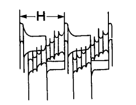
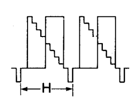
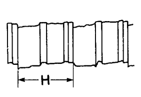
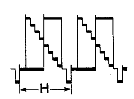
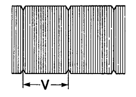
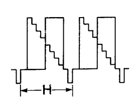
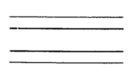
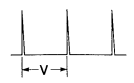
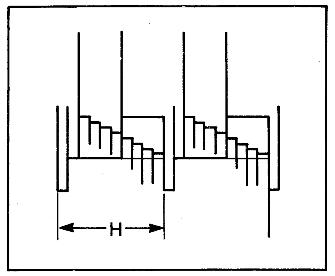
NOTE: THE MEASUREMENT MODE OF THE DC VOLTAGE IN THE BRACKETS (　　) ON THIS DIAGRAM IS RECORD MODE WITH SECAM COLOUR SIGNAL.
THE MEASUREMENT MODE OF THE DC VOLTAGE OUT OF THE BRACKETS ON THIS DIAGRAM IS PLAYBACK MODE WITH SECAM COLOUR SIGNAL.

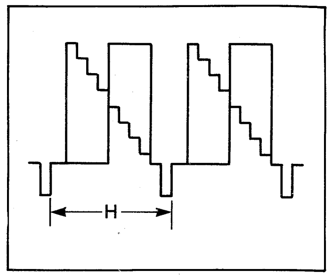
IC3001 (VEFH08D)

PIN NO.	WAVEFORM	PIN NO.	WAVEFORM
2	 0.64 Vp-p (REC)	20	 4.4 Vp-p (REC/P.B)
3	 4.0 Vp-p (REC/P.B)	21	 0.4 Vp-p (REC) 0.44 Vp-p (P.B)
6, 7, 8	 0.66 Vp-p (REC) 0.64 Vp-p (P.B)	22	 1.8 Vp-p (REC/P.B)
10	 0.3 Vp-p (REC) 0.32 Vp-p (P.B)	24, 25	 0.68 Vp-p (REC/P.B)
11, 12	 0.15 Vp-p (11 : REC) 0.3 Vp-p (12 : REC)	29	 0.24 Vp-p (P.B)
11, 12	 0.5 Vp-p (11 : P.B) 0.9 Vp-p (12 : P.B)	30	 0.23 Vp-p (REC) 0.21 Vp-p (P.B)
14	 0.32 Vp-p (REC)	31	 0.66 Vp-p (P.B)
14	 0.36 Vp-p (P.B)	33	 0.28 Vp-p (P.B)
16	 0.68 Vp-p (REC)	35	 1.5 Vp-p (P.B)
16	 0.8 Vp-p (P.B)	39	 0.46 Vp-p (P.B)
18	 0.68 Vp-p (REC/P.B)	42	 1.4 Vp-p (REC)
19	 0.8 Vp-p (REC/P.B)		

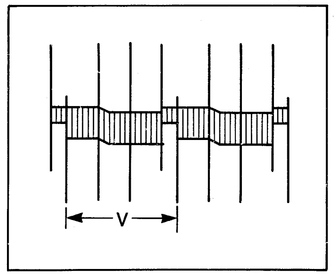
LUMINANCE CIRCUIT TP (Test Point) WAVEFORM (REF. NO. 3000 Series)



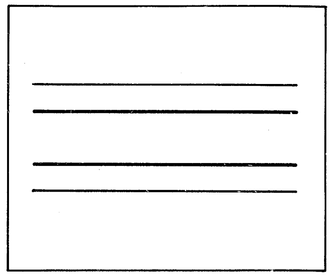
TP3001 REC
0.1 V/20μsec. div. 0.62 Vp-p



TP3005 REC/PLAY
0.5 V/20μsec. div. 1.8 Vp-p

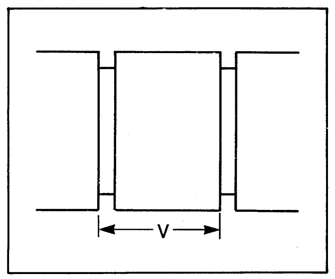


TP3004 REC
0.1 V/5 msec. div. 0.5 Vp-p

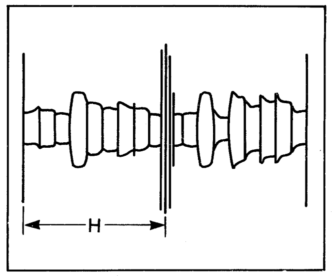


TP3006 REC
0.5 V/20μsec. div. 1.4 Vp-p

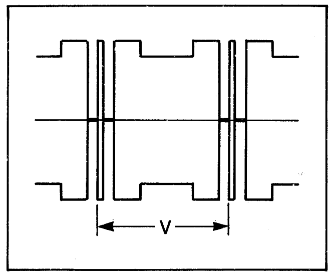
CHROMINANCE CIRCUIT TP (Test Point) WAVEFORM (REF. NO. 8000 Series)



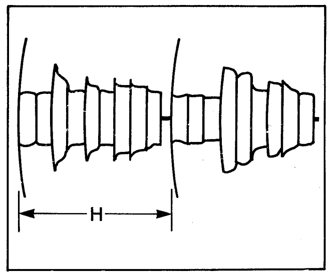
TP8502 PLAY
50 mV/5 msec. div. 0.13 Vp-p



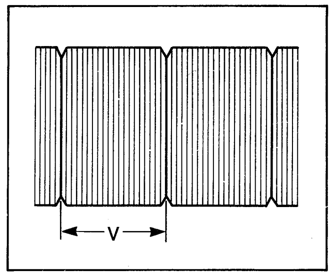
TP8504 REC
0.2 V/20μsec. div. 0.81 Vp-p



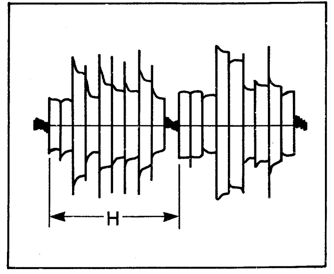
TP8503 REC
0.2 V/10 msec. div. 1.0 Vp-p



TP8505 0.5 V/20μsec. div.
REC : 1.8 Vp-p
PLAY : 0.7 Vp-p

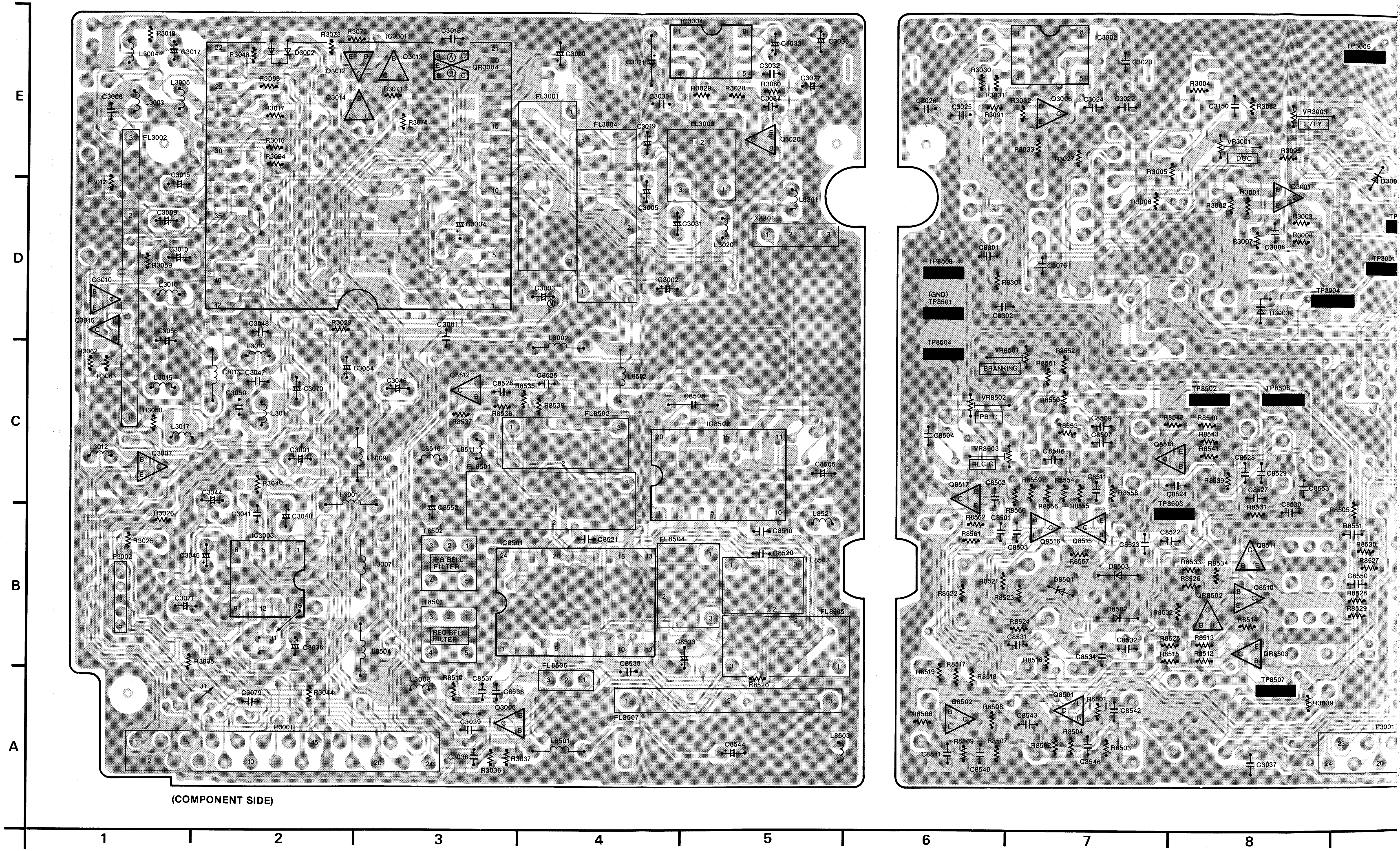


TP8503 PLAY
50 mV/10 msec. div. 0.13 Vp-p



TP8507 REC
0.2 V/20μsec. div. 0.8 Vp-p

3-29. LUMINANCE & CHROMINANCE PACK C.B.A. (VEP03769A)


E
D
C
B
A
1
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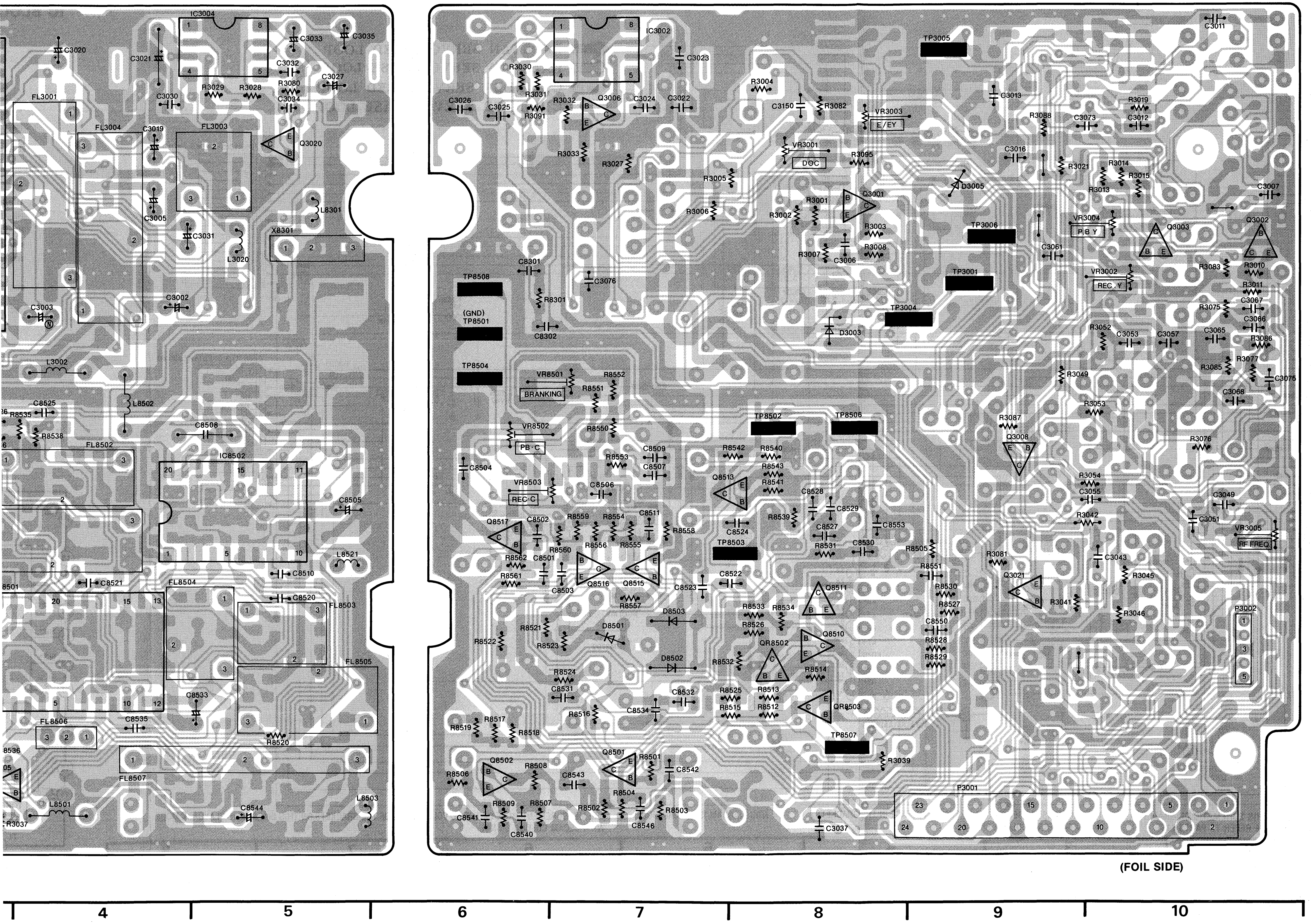
6
7
8
(COMPONENT SIDE)
R3018
L3004
C3017
R3048
D3002
R3073
R3072
IC3001
C3018
Q3012
Q3013
QR3004
Q3014
R3093
R3071
R3017
R3074
R3016
R3024
L3005
C3008
L3003
FL3002
C3015
R3012
C3009
C3010
R3059
L3016
Q3010
Q3015
C3056
R3062
R3063
L3015
R3050
L3017
L3012
Q3007
C3020
C3004
FL3001
FL3004
C3019
C3005
C3003
C3002
IC3004
C3021
C3030
R3029
R3028
C3033
C3035
C3032
R3080
C3034
C3027
FL3003
Q3020
C3031
L3020
L8301
X8301
C3048
L3010
C3047
L3013
C3050
L3011
C3070
R3023
C3054
C3046
C3081
L3002
L8502
C3001
L3009
R3040
C3044
C3041
C3040
R3026
R3025
L3001
P3002
C3045
IC3003
J1
C3071
C3036
R3035
C3079
R3044
P3001
L3007
L8504
Q8512
C8526
R8535
C8525
R8536
R8538
R8537
L8510
L8511
FL8502
FL8501
C8508
IC8502
C8505
C8552
T8502
P.B BELL FILTER
T8501
REC BELL FILTER
IC8501
C8521
FL8504
C8510
C8520
FL8503
L8521
FL8505
C8533
L3008
R8510
C8537
C8536
FL8506
C8535
R8520
FL8507
Q3005
C3039
C3038
R3036
R3037
L8501
C8544
L8503
IC3002
C3023
C3026
C3025
R3030
R3031
R3091
R3032
Q3006
C3024
C3022
R3033
R3027
R3004
C3150
R3082
VR3003
E/EY
VR3001
DOC
R3095
R3005
D300
R3006
R3001
R3002
Q3001
R3003
R3008
R3007
C3006
TP3005
TP3001
TP3004
D3003
TP8508
(GND)
TP8501
TP8504
C8301
R8301
C8302
C3076
VR8501
BRANKING
R8552
R8551
VR8502
PB·C
R8550
C8504
VR8503
REC·C
C8506
C8509
C8507
R8553
TP8502
TP8506
R8542
R8540
R8543
R8541
Q8513
C8528
C8529
R8539
C8527
C8553
C8524
C8530
Q8517
C8502
R8559
R8554
C8511
R8558
R8560
R8556
R8555
TP8503
R8531
R8505
R8562
C8501
Q8516
Q8515
C8523
C8522
R8561
C8503
R8557
Q8511
R8551
R8530
R8527
D8503
R8533
R8534
R8526
C8550
R8521
D8501
R8523
Q8510
R8522
QR8502
R8528
R8529
D8502
R8532
R8514
R8524
C8531
C8532
R8525
R8513
R8515
R8512
QR8503
C8534
R8516
R8517
R8519
R8518
TP8507
Q8501
R8501
C8542
R3039
Q8502
R8508
C8543
R8506
R8504
R8509
R8507
R8502
R8503
C8541
C8540
C8546
C3037
P3001
23
24
20


IC3004
C3020
C3021
C3033
C3035
C3032
R3080
C3034
C3027
R3029
R3028
C3030
FL3001
FL3004
C3019
FL3003
Q3020
C3005
L8301
C3031
L3020
X8301
C3002
C3003
L3002
L8502
C8525
R8535
R8538
C8508
FL8502
IC8502
C8505
L8521
C8521
C8510
C8520
FL8504
FL8503
FL8505
C8533
C8535
FL8506
R8520
FL8507
L8501
C8544
L8503
R3037
IC3002
C3023
R3030
R3031
C3026
C3025
R3091
R3032
Q3006
C3024
C3022
R3033
R3027
C8301
R8301
C3076
C8302
TP8508
(GND)
TP8501
TP8504
VR8501
BRANKING
R8552
R8551
VR8502
PB·C
R8550
C8504
R8553
C8509
C8507
VR8503
REC·C
C8506
Q8517
C8502
R8559
R8554
C8511
R8558
R8560
R8556
R8555
R8562
C8501
R8561
C8503
Q8516
Q8515
R8557
R8521
R8523
R8522
D8501
D8503
D8502
R8524
C8531
R8516
C8534
C8532
R8519
R8517
R8518
R8506
Q8502
R8508
C8543
Q8501
R8501
C8542
R8504
R8509
R8507
R8502
R8503
C8541
C8540
C8546
TP3005
R3004
C3150
R3082
VR3003
E/EY
VR3001
DOC
R3095
R3005
R3006
R3002
R3001
Q3001
R3003
R3008
R3007
C3006
D3005
D3003
TP3006
TP3001
TP3004
TP8502
TP8506
R8542
R8540
R8543
R8541
Q8513
C8528
C8529
R8539
C8524
C8527
C8553
TP8503
R8531
C8530
R8505
C8522
C8523
Q8511
R8533
R8534
R8526
Q8510
QR8502
R8532
R8514
R8525
R8513
R8515
R8512
QR8503
TP8507
R3039
C3037
P3001
C3011
C3013
R3088
C3073
C3012
R3019
C3016
R3021
R3014
R3013
R3015
C3007
VR3004
P.B.Y
Q3003
Q3002
C3061
VR3002
REC. Y
R3083
R3010
R3011
C3067
R3075
C3066
R3052
C3053
C3057
C3065
R3086
R3085
R3077
C3075
R3049
C3068
R3053
R3087
Q3008
R3076
R3054
C3055
C3049
R3042
C3051
VR3005
RF FREQ.
R3081
C8550
R8551
R8530
R8527
R8528
R8529
Q3021
R3041
C3043
R3045
R3046
P3002
4
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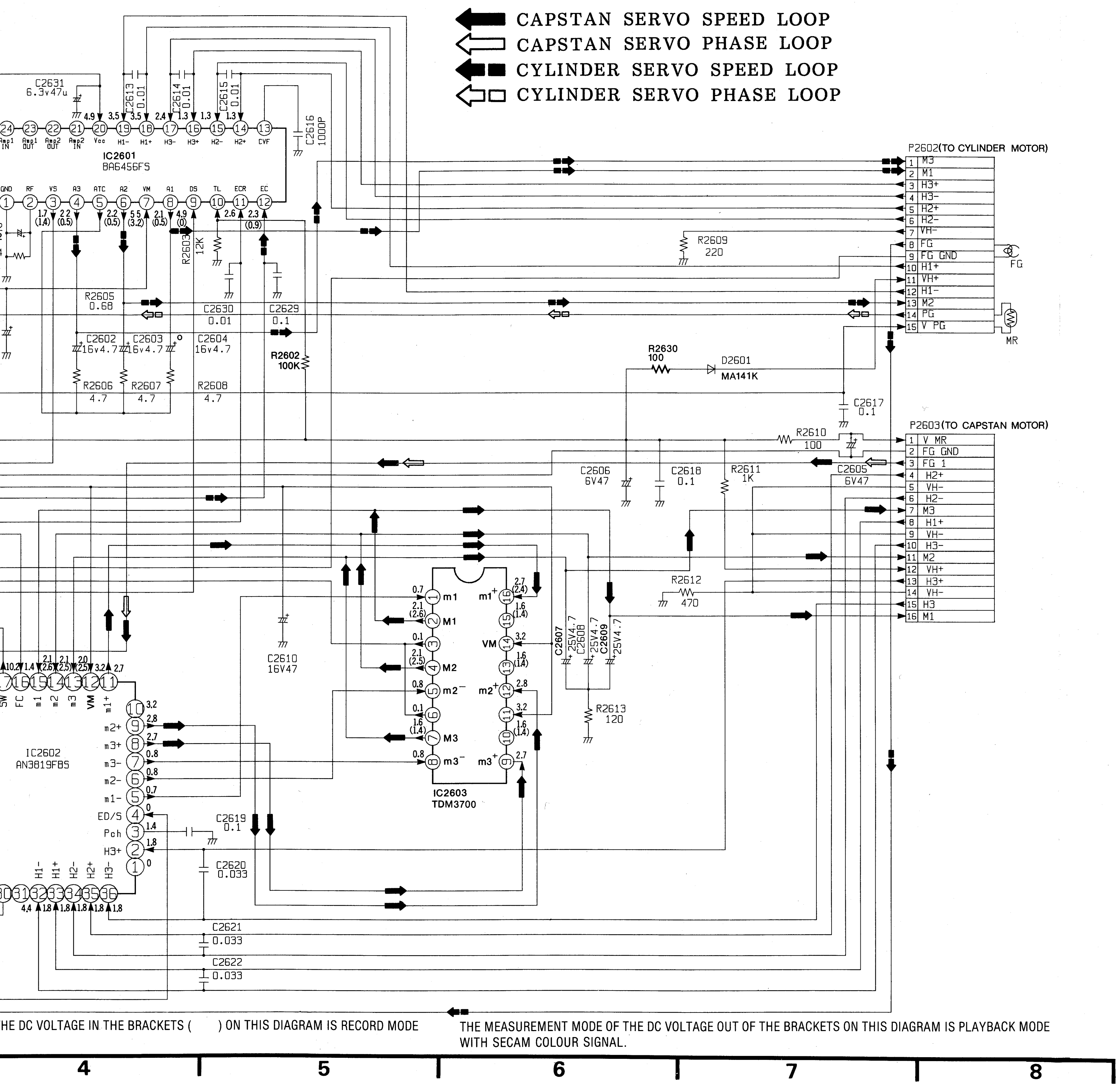
(FOIL SIDE)

LUMINANCE & CHROMINANCE PACK C.B.A.		
Transistor		
Q3001	D-8	Ⓕ
Q3002	D-10	Ⓕ
Q3003	D-10	Ⓕ
Q3005	A-3	©
Q3006	E-7	Ⓕ
Q3007	C-1	©
Q3008	C-9	Ⓕ
Q3010	D-1	©
Q3012	E-2	©
Q3013	E-3	©
Q3014	E-2	©
Q3015	D-1	©
Q3020	E-5	©
Q3021	B-9	Ⓕ
Q8501	A-7	Ⓕ
Q8502	A-6	Ⓕ
Q8510	B-8	Ⓕ
Q8511	B-8	Ⓕ
Q8512	C-3	©
Q8513	C-8	Ⓕ
Q8515	B-7	Ⓕ
Q8516	B-7	Ⓕ
Q8517	C-6	Ⓕ
Transistor & Resistor		
QR3004	E-3	©
QR8502	B-8	Ⓕ
QR8503	B-8	Ⓕ
Integrated Circuit		
IC3001	E-3	©
IC3002	E-7	Ⓕ
IC3003	B-2	©
IC3004	E-5	©
IC8501	B-3	©
IC8502	C-5	©
Test Point		
TP3001	D-9	Ⓕ
TP3004	D-8	Ⓕ
TP3005	E-9	Ⓕ
TP3006	D-9	Ⓕ
TP8501	D-6	Ⓕ
TP8502	C-8	Ⓕ
TP8504	C-6	Ⓕ
TP8506	C-8	Ⓕ
TP8507	A-8	Ⓕ
TP8508	D-6	Ⓕ
Adjustment		
T8501	B-3	©
T8502	B-3	©
VR3001	E-8	Ⓕ
VR3002	D-10	Ⓕ
VR3003	E-8	Ⓕ
VR3004	D-10	Ⓕ
VR3005	C-10	Ⓕ
VR8501	C-7	Ⓕ
VR8502	C-6	Ⓕ
VR8503	C-6	Ⓕ
Connector		
P3001	A-2	©
P3001	A-9	Ⓕ
P3002	B-1	©
P3002	B-10	Ⓕ

ADDRESS INFORMATION
©...COMPONENT SIDE
Ⓕ...FOIL SIDE

Next Page:
MOTOR DRIVE Section

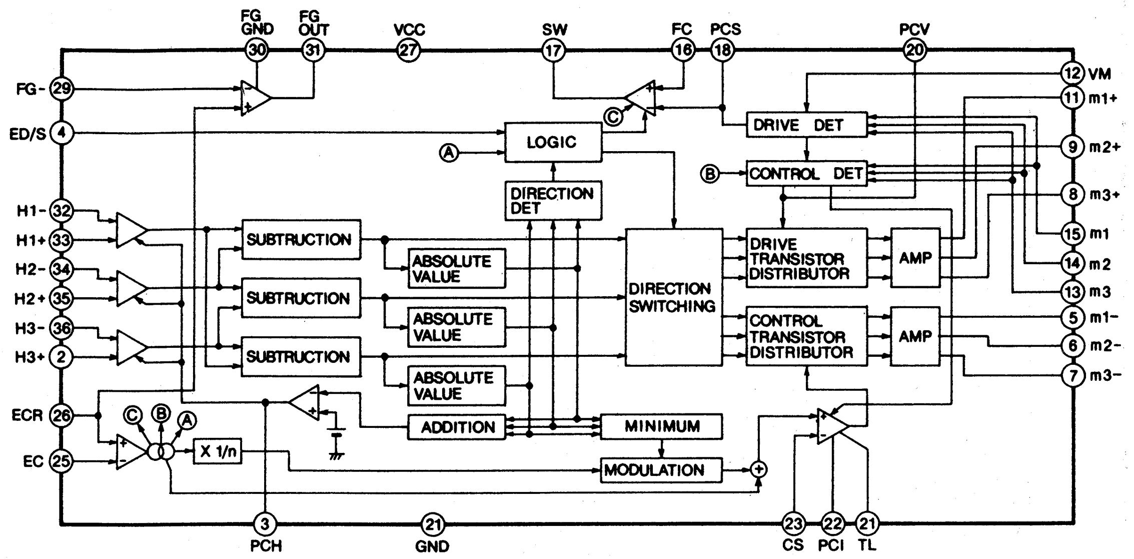

CAPSTAN SERVO SPEED LOOP
CAPSTAN SERVO PHASE LOOP
CYLINDER SERVO SPEED LOOP
CYLINDER SERVO PHASE LOOP
IC2601
BA6456FS
IC2602
AN3819FBS
IC2603
TDM3700
P2602(TO CYLINDER MOTOR)
P2603(TO CAPSTAN MOTOR)
C2631 6.3v47u
C2613 0.01
C2614 0.01
C2615 0.01
C2616 1000P
R2609 220
R2605 0.68
C2630 0.01
C2629 0.1
C2602 16v4.7
C2603 16v4.7
C2604 16v4.7
R2602 100K
R2603 12K
R2606 4.7
R2607 4.7
R2608 4.7
R2630 100
D2601 MA141K
C2617 0.1
R2610 100
C2606 6V47
C2618 0.1
R2611 1K
C2605 6V47
R2612 470
C2607 25V4.7
C2608 25V4.7
C2609 25V4.7
R2613 120
C2610 16V47
C2619 0.1
C2620 0.033
C2621 0.033
C2622 0.033
FG
MR
4
5
6
7
8

HE DC VOLTAGE IN THE BRACKETS (   ) ON THIS DIAGRAM IS RECORD MODE

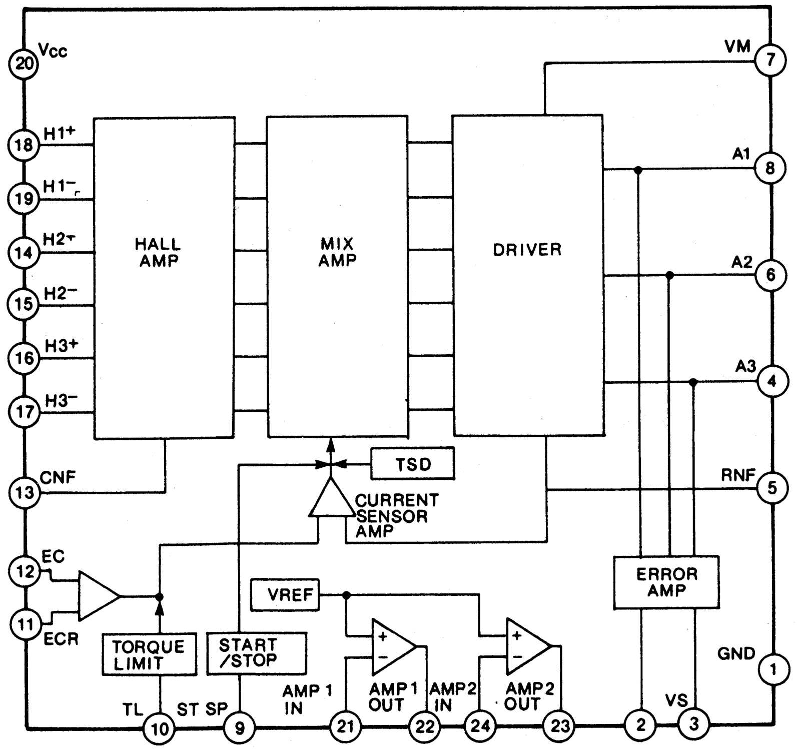
THE MEASUREMENT MODE OF THE DC VOLTAGE OUT OF THE BRACKETS ON THIS DIAGRAM IS PLAYBACK MODE WITH SECAM COLOUR SIGNAL.

IC BLOCK

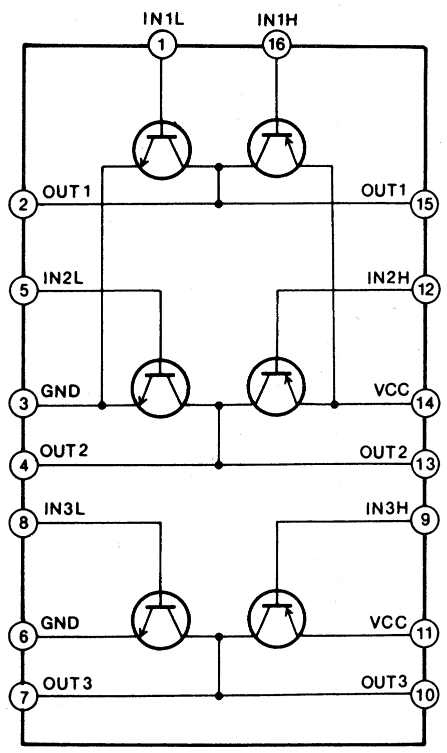
IC2601 (AN3819FBS)


FG GND
FG OUT
VCC
SW
FC
PCS
PCV
FG-
ED/S
H1-
H1+
H2-
H2+
H3-
H3+
ECR
EC
LOGIC
DIRECTION DET
SUBTRUCTION
ABSOLUTE VALUE
ADDITION
DIRECTION SWITCHING
MINIMUM
MODULATION
DRIVE DET
CONTROL DET
DRIVE TRANSISTOR DISTRIBUTOR
CONTROL TRANSISTOR DISTRIBUTOR
AMP
X 1/n
VM
m1+
m2+
m3+
m1
m2
m3
m1-
m2-
m3-
PCH
GND
CS
PCI
TL

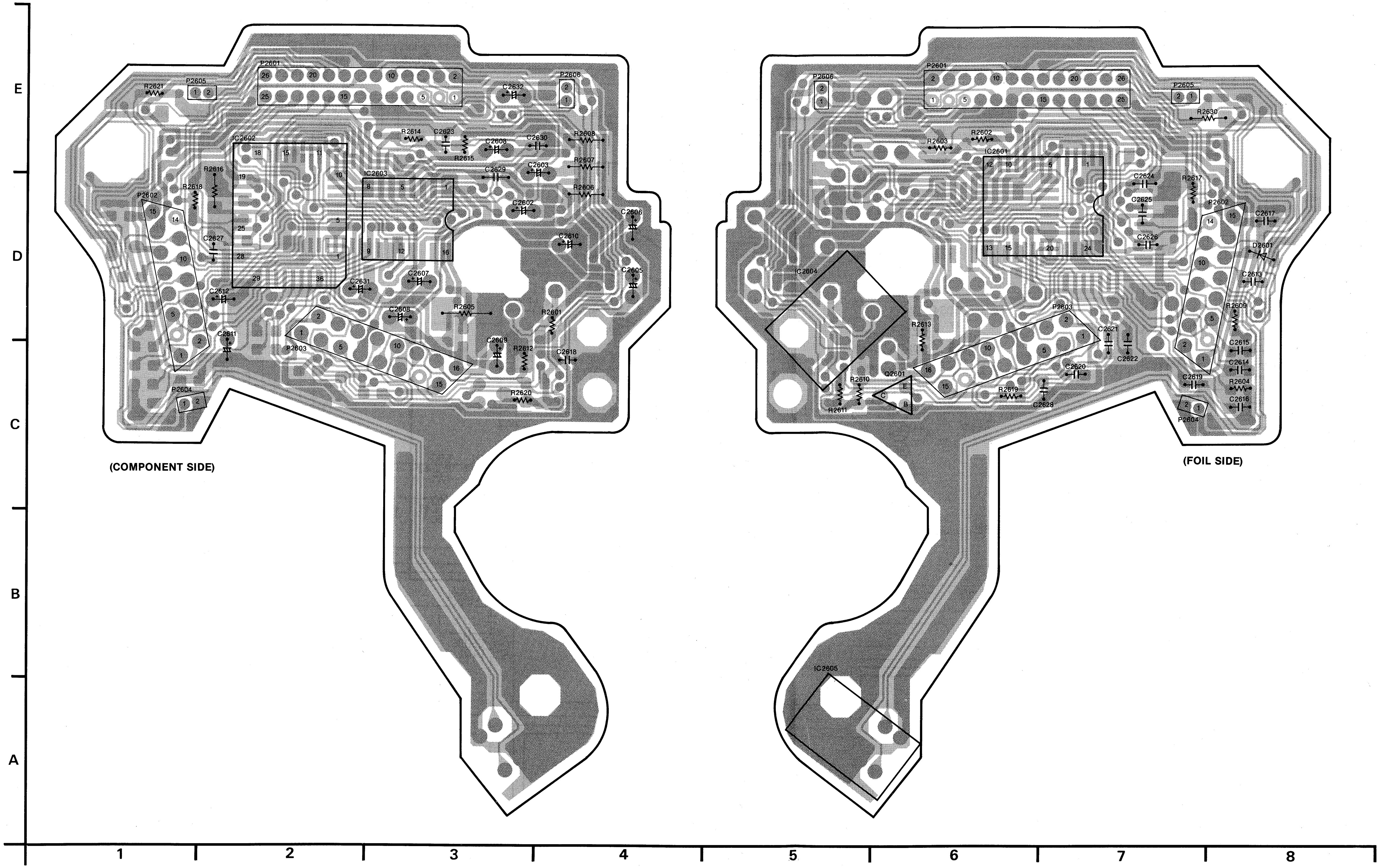
IC2601 (BA6456FS)


Vcc
H1+
H1-
H2+
H2-
H3+
H3-
CNF
EC
ECR
HALL AMP
MIX AMP
DRIVER
TSD
CURRENT SENSOR AMP
VREF
TORQUE LIMIT
START /STOP
ERROR AMP
VM
A1
A2
A3
RNF
GND
TL
ST SP
AMP 1 IN
AMP1 OUT
AMP2 IN
AMP2 OUT
VS

IC2603 (TDM3700TP1)


IN1L
IN1H
OUT1
IN2L
IN2H
GND
VCC
OUT2
IN3L
IN3H
OUT3

3-31. MOTOR DRIVE C.B.A. (VEP02349A)


E
D
C
B
A
1
2
3
4
5
6
7
8
P2601
P2605
P2606
P2602
P2603
P2604
IC2602
IC2603
R2621
R2618
R2616
R2614
R2615
R2603
R2605
R2612
R2620
R2601
R2606
R2607
R2608
C2623
C2608
C2630
C2632
C2629
C2603
C2602
C2627
C2612
C2611
C2631
C2607
C2606
C2609
C2610
C2605
C2618
IC2601
IC2604
IC2605
Q2601
D2601
R2602
R2630
R2617
R2609
R2613
R2610
R2611
R2619
R2604
C2624
C2625
C2626
C2617
C2613
C2621
C2622
C2620
C2628
C2615
C2614
C2619
C2616
E
C
B

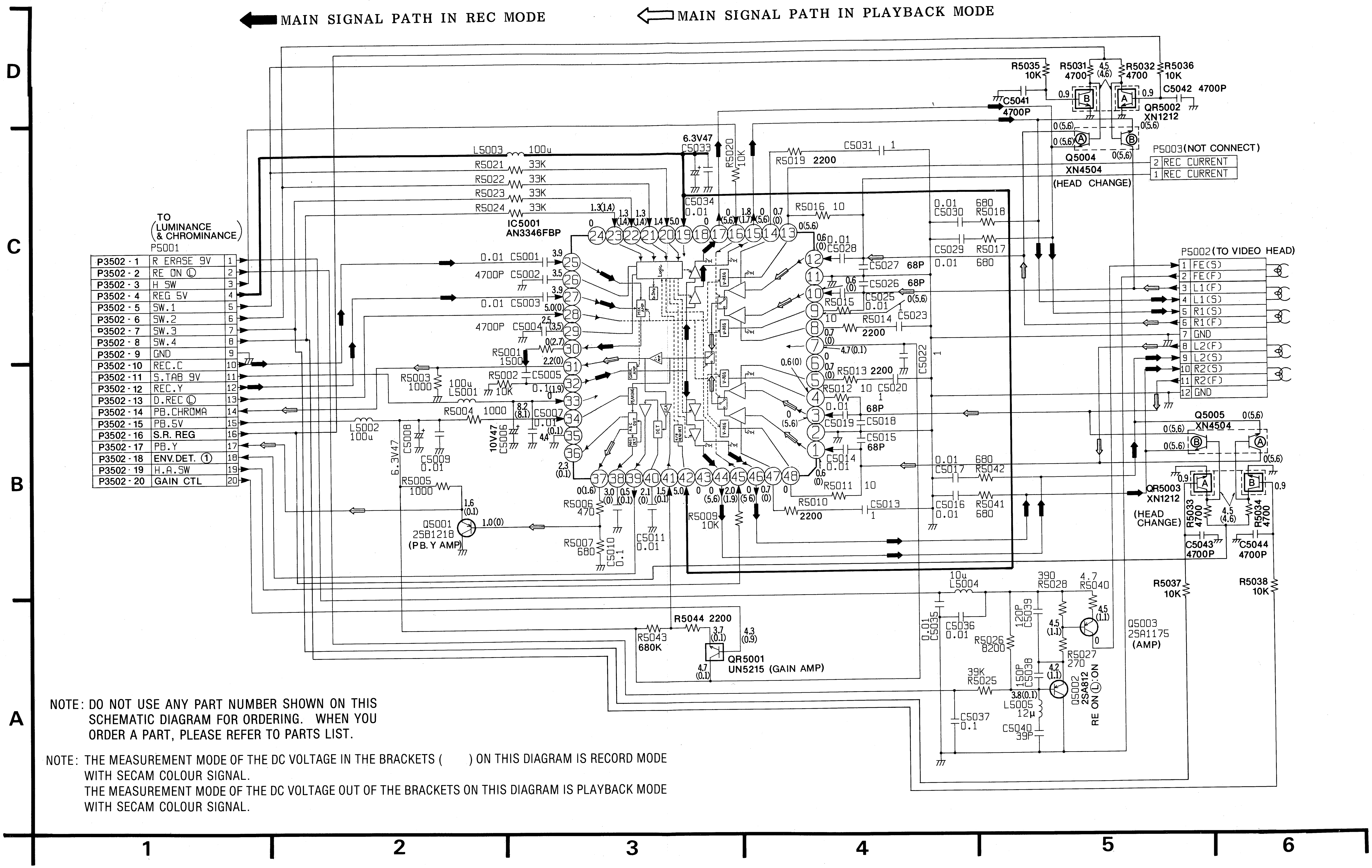
(COMPONENT SIDE)

(FOIL SIDE)

MOTOR DRIVE C.B.A.	
Transistor	
Q2601	C-6 Ⓕ
Integrated Circuit	
IC2601	D-6 Ⓕ
IC2602	E-2 ©
IC2603	D-3 ©
IC2604	D-5 Ⓕ
IC2605	A-5 Ⓕ
Connector	
P2601	E-2 ©
P2601	E-6 Ⓕ
P2602	D-1 ©
P2602	D-8 Ⓕ
P2603	C-2 ©
P2603	C-7 Ⓕ
P2604	C-1 ©
P2604	C-7 Ⓕ
P2605	E-1 ©
P2605	E-7 Ⓕ
P2606	E-4 ©
P2606	E-5 Ⓕ

ADDRESS INFORMATION
©...COMPONENT SIDE
Ⓕ...FOIL SIDE

3-32. HEAD AMP SCHEMATIC DIAGRAM


MAIN SIGNAL PATH IN REC MODE
MAIN SIGNAL PATH IN PLAYBACK MODE
TO (LUMINANCE & CHROMINANCE)
P5001
P3502 - 1 R ERASE 9V 1
P3502 - 2 RE ON Ⓛ 2
P3502 - 3 H SW 3
P3502 - 4 REG 5V 4
P3502 - 5 SW.1 5
P3502 - 6 SW.2 6
P3502 - 7 SW.3 7
P3502 - 8 SW.4 8
P3502 - 9 GND 9
P3502 - 10 REC.C 10
P3502 - 11 S.TAB 9V 11
P3502 - 12 REC.Y 12
P3502 - 13 D.REC Ⓛ 13
P3502 - 14 PB.CHROMA 14
P3502 - 15 PB.5V 15
P3502 - 16 S.R. REG 16
P3502 - 17 PB.Y 17
P3502 - 18 ENV.DET. ① 18
P3502 - 19 H.A.SW 19
P3502 - 20 GAIN CTL 20
IC5001
AN3346FBP
L5003 100u
R5021 33K
R5022 33K
R5023 33K
R5024 33K
6.3V47 C5033
R5020 10K
C5034 0.01
R5019 2200
C5031 1
R5016 10
C5030 0.01
R5018 680
C5029 0.01
R5017 680
C5028 0.01
C5027 68P
C5026 68P
C5025 0.01
R5015 10
R5014 2200
C5023
C5022 1
R5013 2200
R5012 10
C5020 1
C5019 0.01
C5018 68P
C5015 68P
C5014 0.01
R5011 10
R5010 2200
C5013 1
C5017 0.01
R5042 680
C5016 0.01
R5041 680
C5001 0.01
C5002 4700P
C5003 0.01
C5004 4700P
R5001 1500
R5002 10K
C5005 0.1
R5003 1000
L5001 100u
R5004 1000
C5007 0.01
L5002 100u
C5008 6.3V47
C5009 0.01
C5006 10V47
R5005 1000
Q5001 2SB1218 (PB.Y AMP)
R5006 470
R5007 680
C5010 0.1
C5011 0.01
R5009 10K
R5044 2200
R5043 680K
QR5001 UN5215 (GAIN AMP)
R5035 10K
R5031 4700
R5032 4700
R5036 10K
C5041 4700P
C5042 4700P
QR5002 XN1212
Q5004 XN4504 (HEAD CHANGE)
P5003 (NOT CONNECT)
2 REC CURRENT
1 REC CURRENT
P5002 (TO VIDEO HEAD)
1 FE(S)
2 FE(F)
3 L1(F)
4 L1(S)
5 R1(S)
6 R1(F)
7 GND
8 L2(F)
9 L2(S)
10 R2(S)
11 R2(F)
12 GND
Q5005 XN4504
QR5003 XN1212 (HEAD CHANGE)
R5033 4700
R5034 4700
C5043 4700P
C5044 4700P
R5037 10K
R5038 10K
L5004 10u
C5035 0.01
C5036 0.01
C5039 120P
R5026 8200
R5028 390
R5040 4.7
Q5003 2SA1175 (AMP)
R5027 270
R5025 39K
C5038 150P
Q5002 2SA812 RE ON Ⓛ ON
L5005 12µ
C5037 0.1
C5040 39P
D
C
B
A
1
2
3
4
5
6

NOTE: DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING. WHEN YOU ORDER A PART, PLEASE REFER TO PARTS LIST.

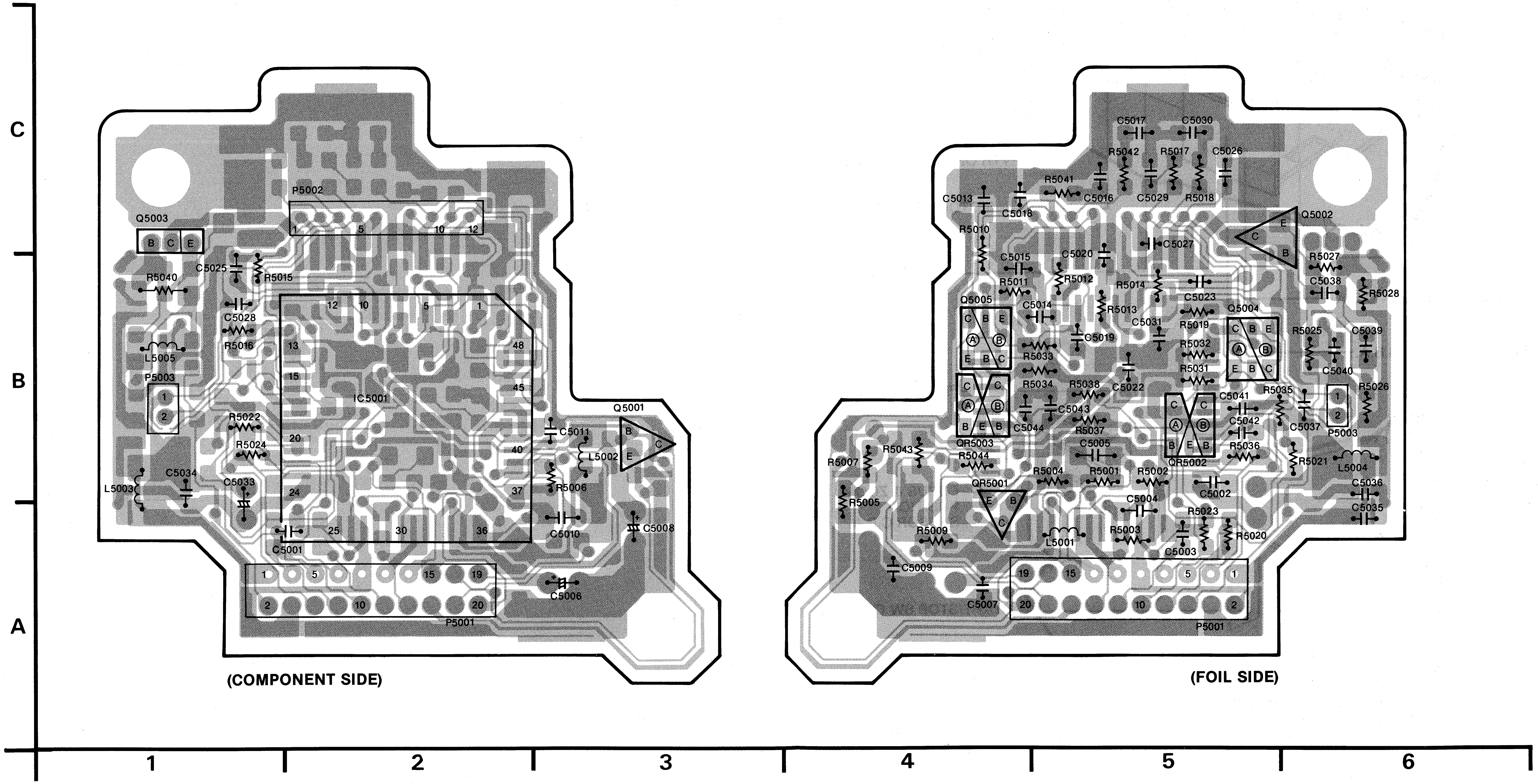
NOTE: THE MEASUREMENT MODE OF THE DC VOLTAGE IN THE BRACKETS (　) ON THIS DIAGRAM IS RECORD MODE WITH SECAM COLOUR SIGNAL.
THE MEASUREMENT MODE OF THE DC VOLTAGE OUT OF THE BRACKETS ON THIS DIAGRAM IS PLAYBACK MODE WITH SECAM COLOUR SIGNAL.

Back Page:
MOTOR DRIVE Section

3-33. HEAD AMP C.B.A. (VEP05147A)

HEAD AMP C.B.A.		
Transistor		
Q5001	B-3	Ⓒ
Q5002	C-6	Ⓕ
Q5003	C-1	Ⓒ
Q5004	B-5	Ⓕ
Q5005	B-4	Ⓕ
Transistor & Resistor		
QR5001	B-4	Ⓕ
QR5002	B-5	Ⓕ
QR5003	B-4	Ⓕ
Integrated Circuit		
IC5001	B-2	Ⓒ
Connector		
P5001	A-2	Ⓒ
P5001	C-5	Ⓕ
P5002	D-2	Ⓒ
P5003	B-1	Ⓒ
P5003	B-6	Ⓕ

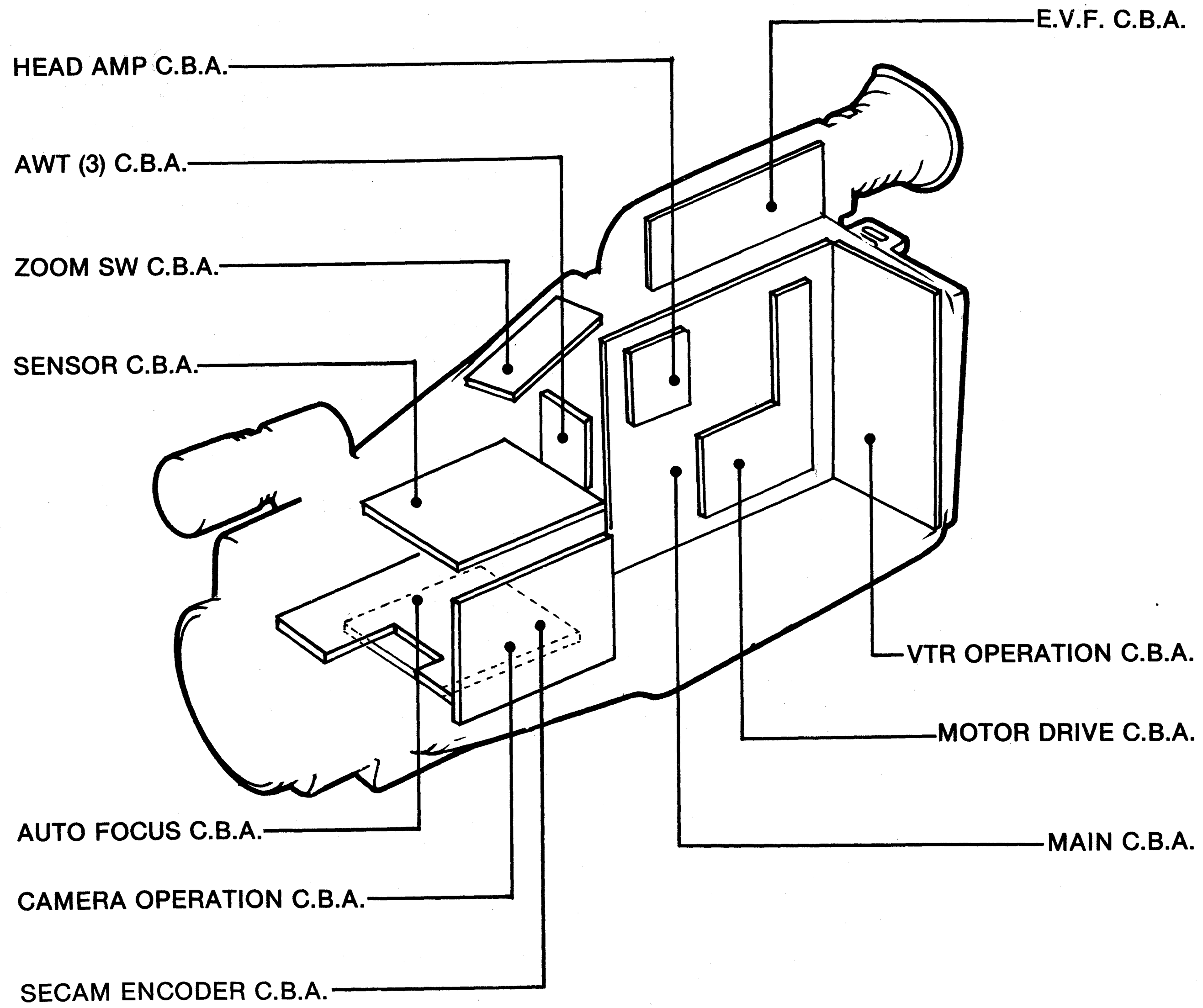
ADDRESS INFORMATION
Ⓒ...COMPONENT SIDE
Ⓕ...FOIL SIDE

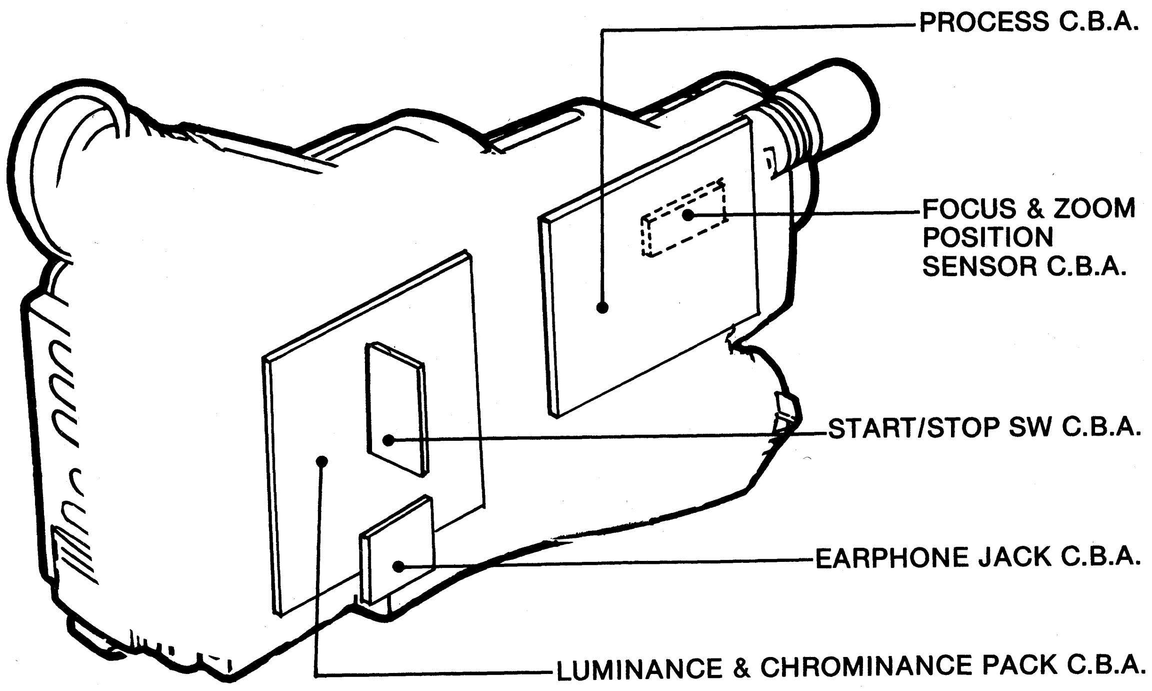

C
B
A
1
2
3
4
5
6
P5002
1
5
10
12
Q5003
B
C
E
C5025
R5015
R5040
C5028
R5016
L5005
P5003
1
2
R5022
R5024
L5003
C5034
C5033
C5001
IC5001
12
10
5
1
13
15
20
24
25
30
36
37
40
45
48
Q5001
B
E
C
C5011
L5002
R5006
C5010
C5008
C5006
1
5
15
19
2
10
20
P5001
C5017
C5030
R5042
R5017
C5026
R5041
C5016
C5029
R5018
C5013
C5018
Q5002
E
C
B
R5010
C5015
C5020
C5027
R5027
R5011
R5012
R5014
C5038
R5028
C5023
Q5005
C
B
E
Ⓐ
Ⓑ
E
B
C
C5014
R5013
C5031
R5019
Q5004
C5019
R5033
R5032
R5031
R5025
C5039
C5040
R5034
R5038
C5022
R5035
R5026
C5041
C5043
C5044
C5042
C5037
P5003
QR5003
R5037
C5005
R5036
R5043
R5044
QR5002
R5007
R5021
L5004
QR5001
R5004
R5001
R5002
C5036
C5002
R5005
C5004
C5035
R5023
R5009
R5003
R5020
L5001
C5003
C5009
C5007
19
15
5
1
20
10
2
P5001

(COMPONENT SIDE)

(FOIL SIDE)

3-34. CIRCUIT BOARD LAYOUT

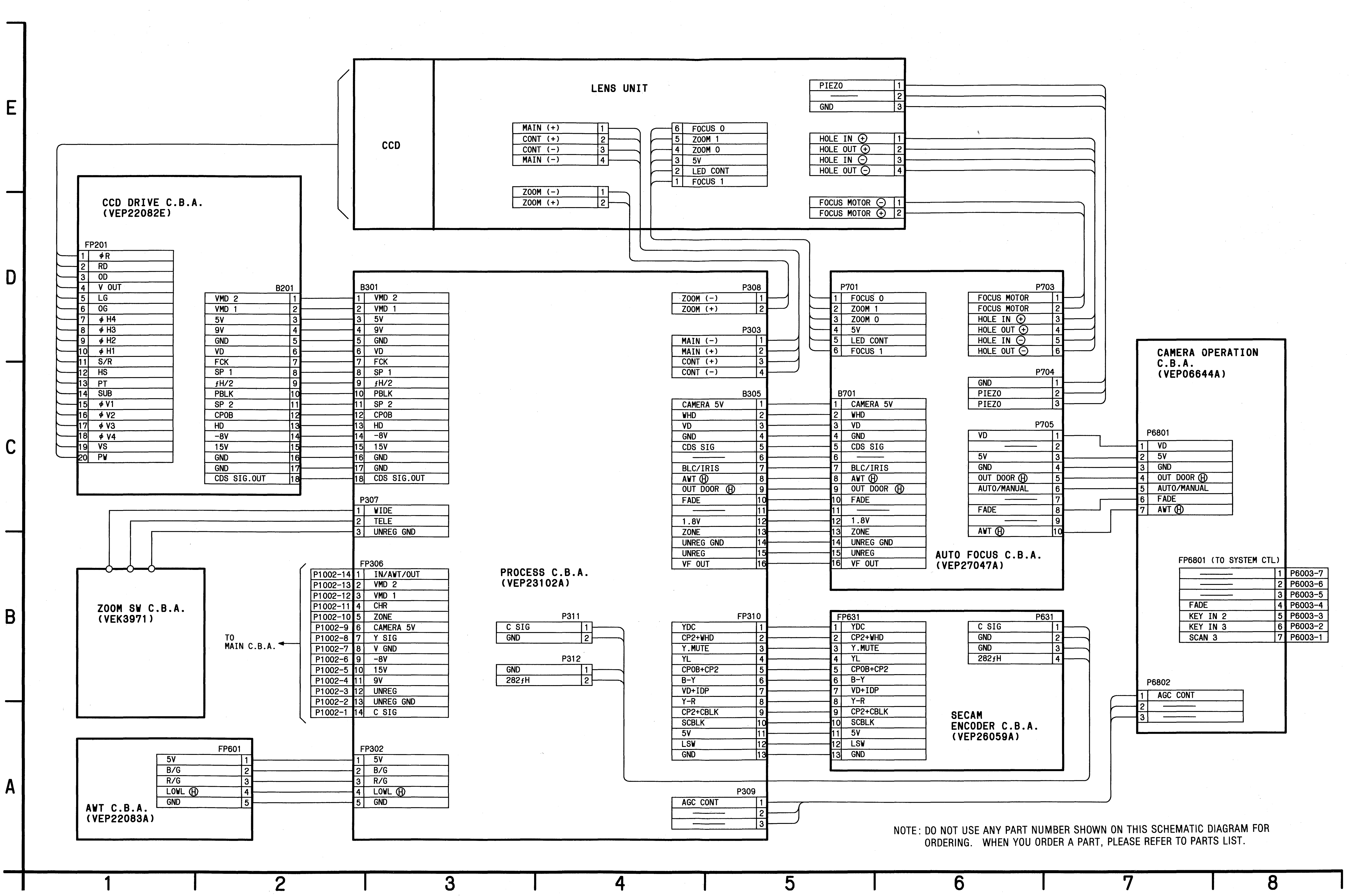

E.V.F. C.B.A.
HEAD AMP C.B.A.
AWT (3) C.B.A.
ZOOM SW C.B.A.
SENSOR C.B.A.
VTR OPERATION C.B.A.
MOTOR DRIVE C.B.A.
MAIN C.B.A.
AUTO FOCUS C.B.A.
CAMERA OPERATION C.B.A.
SECAM ENCODER C.B.A.


PROCESS C.B.A.
FOCUS & ZOOM POSITION SENSOR C.B.A.
START/STOP SW C.B.A.
EARPHONE JACK C.B.A.
LUMINANCE & CHROMINANCE PACK C.B.A.

Back Page:
HEAD AMP Section

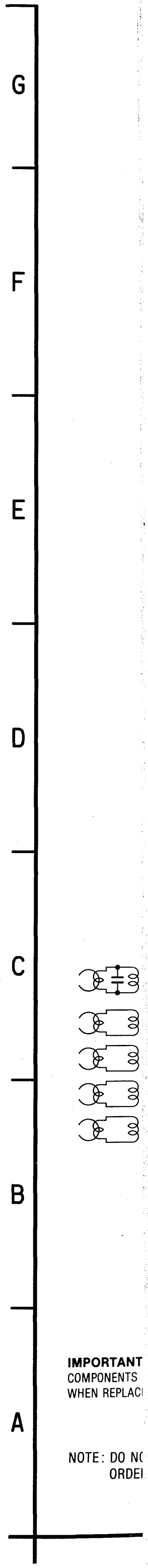
Memo

3-35. CAMERA INTERCONNECTION SCHEMATIC DIAGRAM


E
D
C
B
A
1
2
3
4
5
6
7
8
LENS UNIT
CCD
PIEZO 1
——— 2
GND 3
MAIN (+) 1
CONT (+) 2
CONT (-) 3
MAIN (-) 4
6 FOCUS 0
5 ZOOM 1
4 ZOOM 0
3 5V
2 LED CONT
1 FOCUS 1
HOLE IN ⊕ 1
HOLE OUT ⊕ 2
HOLE IN ⊖ 3
HOLE OUT ⊖ 4
ZOOM (-) 1
ZOOM (+) 2
FOCUS MOTOR ⊖ 1
FOCUS MOTOR ⊕ 2
CCD DRIVE C.B.A.
(VEP22082E)
FP201
1 ϕR
2 RD
3 OD
4 V OUT
5 LG
6 OG
7 ϕH4
8 ϕH3
9 ϕH2
10 ϕH1
11 S/R
12 HS
13 PT
14 SUB
15 ϕV1
16 ϕV2
17 ϕV3
18 ϕV4
19 VS
20 PW
B201
VMD 2 1
VMD 1 2
5V 3
9V 4
GND 5
VD 6
FCK 7
SP 1 8
ƒH/2 9
PBLK 10
SP 2 11
CPOB 12
HD 13
-8V 14
15V 15
GND 16
GND 17
CDS SIG.OUT 18
B301
1 VMD 2
2 VMD 1
3 5V
4 9V
5 GND
6 VD
7 FCK
8 SP 1
9 ƒH/2
10 PBLK
11 SP 2
12 CPOB
13 HD
14 -8V
15 15V
16 GND
17 GND
18 CDS SIG.OUT
P307
1 WIDE
2 TELE
3 UNREG GND
ZOOM SW C.B.A.
(VEK3971)
TO MAIN C.B.A.
FP306
P1002-14 1 IN/AWT/OUT
P1002-13 2 VMD 2
P1002-12 3 VMD 1
P1002-11 4 CHR
P1002-10 5 ZONE
P1002-9 6 CAMERA 5V
P1002-8 7 Y SIG
P1002-7 8 V GND
P1002-6 9 -8V
P1002-5 10 15V
P1002-4 11 9V
P1002-3 12 UNREG
P1002-2 13 UNREG GND
P1002-1 14 C SIG
AWT C.B.A.
(VEP22083A)
FP601
5V 1
B/G 2
R/G 3
LOWL Ⓗ 4
GND 5
FP302
1 5V
2 B/G
3 R/G
4 LOWL Ⓗ
5 GND
PROCESS C.B.A.
(VEP23102A)
P311
C SIG 1
GND 2
P312
GND 1
282ƒH 2
P308
ZOOM (-) 1
ZOOM (+) 2
P303
MAIN (-) 1
MAIN (+) 2
CONT (+) 3
CONT (-) 4
B305
CAMERA 5V 1
WHD 2
VD 3
GND 4
CDS SIG 5
——— 6
BLC/IRIS 7
AWT Ⓗ 8
OUT DOOR Ⓗ 9
FADE 10
——— 11
1.8V 12
ZONE 13
UNREG GND 14
UNREG 15
VF OUT 16
FP310
YDC 1
CP2+WHD 2
Y.MUTE 3
YL 4
CPOB+CP2 5
B-Y 6
VD+IDP 7
Y-R 8
CP2+CBLK 9
SCBLK 10
5V 11
LSW 12
GND 13
P309
AGC CONT 1
——— 2
——— 3
P701
1 FOCUS 0
2 ZOOM 1
3 ZOOM 0
4 5V
5 LED CONT
6 FOCUS 1
P703
FOCUS MOTOR 1
FOCUS MOTOR 2
HOLE IN ⊕ 3
HOLE OUT ⊕ 4
HOLE IN ⊖ 5
HOLE OUT ⊖ 6
P704
GND 1
PIEZO 2
PIEZO 3
B701
1 CAMERA 5V
2 WHD
3 VD
4 GND
5 CDS SIG
6 ———
7 BLC/IRIS
8 AWT Ⓗ
9 OUT DOOR Ⓗ
10 FADE
11 ———
12 1.8V
13 ZONE
14 UNREG GND
15 UNREG
16 VF OUT
P705
VD 1
——— 2
5V 3
GND 4
OUT DOOR Ⓗ 5
AUTO/MANUAL 6
——— 7
FADE 8
——— 9
AWT Ⓗ 10
AUTO FOCUS C.B.A.
(VEP27047A)
FP631
1 YDC
2 CP2+WHD
3 Y.MUTE
4 YL
5 CPOB+CP2
6 B-Y
7 VD+IDP
8 Y-R
9 CP2+CBLK
10 SCBLK
11 5V
12 LSW
13 GND
P631
C SIG 1
GND 2
GND 3
282ƒH 4
SECAM ENCODER C.B.A.
(VEP26059A)
CAMERA OPERATION C.B.A.
(VEP06644A)
P6801
1 VD
2 5V
3 GND
4 OUT DOOR Ⓗ
5 AUTO/MANUAL
6 FADE
7 AWT Ⓗ
FP6801 (TO SYSTEM CTL)
——— 1 P6003-7
——— 2 P6003-6
——— 3 P6003-5
FADE 4 P6003-4
KEY IN 2 5 P6003-3
KEY IN 3 6 P6003-2
SCAN 3 7 P6003-1
P6802
1 AGC CONT
2 ———
3 ———

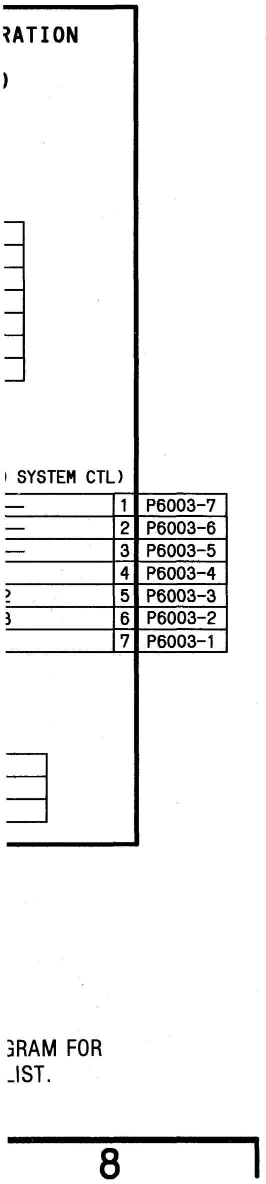
NOTE: DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING. WHEN YOU ORDER A PART, PLEASE REFER TO PARTS LIST.

3-36. VTR

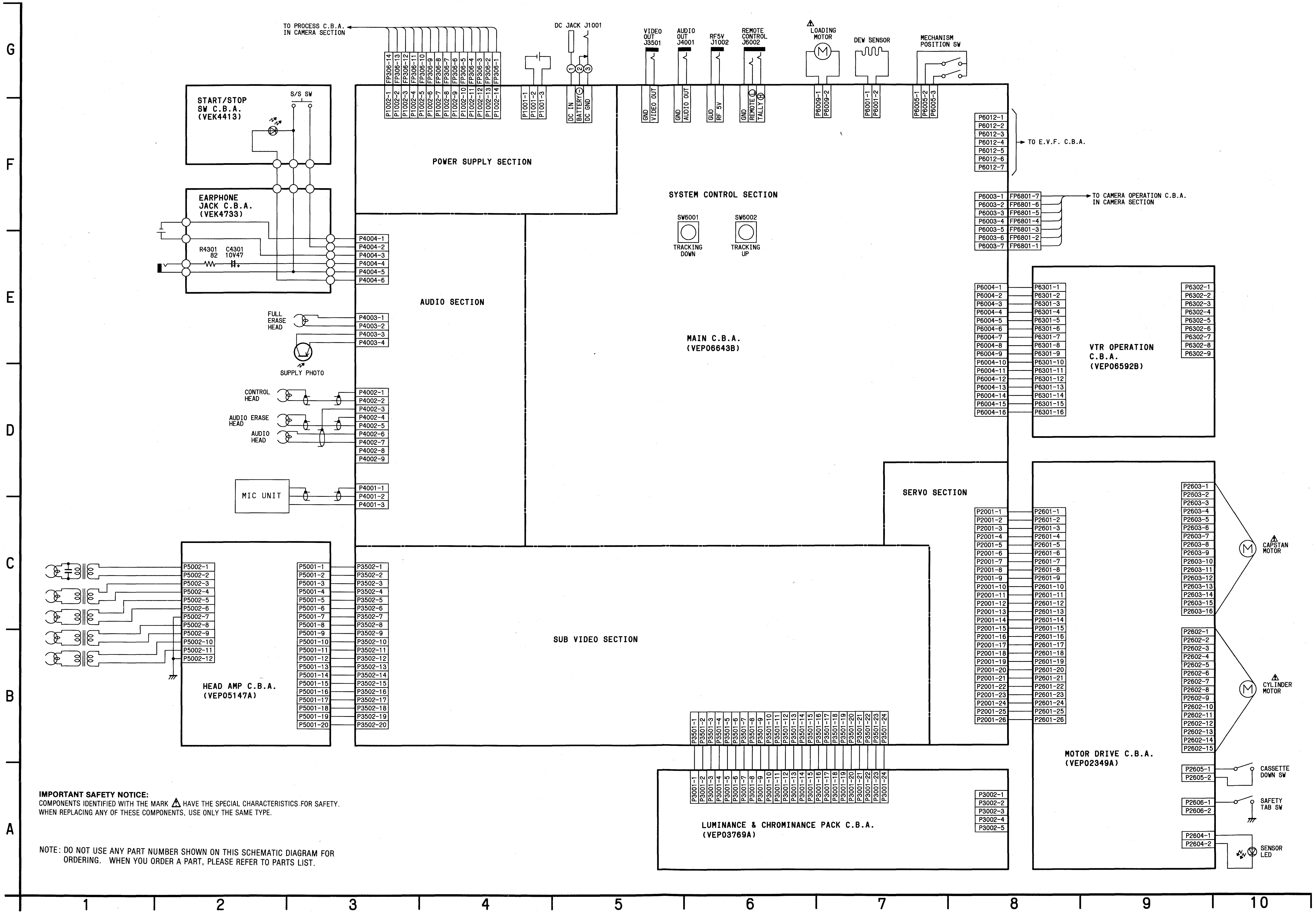


IMPORTANT
COMPONENTS
WHEN REPLAC

NOTE: DO N
ORDE


RATION
)
SYSTEM CTL)
1 P6003-7
2 P6003-6
3 P6003-5
4 P6003-4
5 P6003-3
6 P6003-2
7 P6003-1
GRAM FOR
LIST.
8

3-36. VTR INTERCONNECTION SCHEMATIC DIAGRAM


G
F
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C
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2
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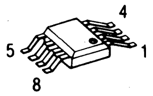
4
5
6
7
8
9
10
TO PROCESS C.B.A. IN CAMERA SECTION
FP306-14 FP306-13 FP306-12 FP306-11 FP306-10 FP306-9 FP306-8 FP306-7 FP306-6 FP306-5 FP306-4 FP306-3 FP306-2 FP306-1
P1002-1 P1002-2 P1002-3 P1002-4 P1002-5 P1002-6 P1002-7 P1002-8 P1002-9 P1002-10 P1002-11 P1002-12 P1002-13 P1002-14
DC JACK J1001
P1001-1 P1001-2 P1001-3
DC IN
BATTERY⊖
DC GND
VIDEO OUT J3501
GND
VIDEO OUT
AUDIO OUT J4001
GND
AUDIO OUT
RF5V J1002
GUD
RF 5V
REMOTE CONTROL J6002
GND
REMOTE⊖
TALLY⊕
LOADING MOTOR
P6009-1 P6009-2
DEW SENSOR
P6001-1 P6001-2
MECHANISM POSITION SW
P6005-1 P6005-2 P6005-3
START/STOP SW C.B.A. (VEK4413)
S/S SW
EARPHONE JACK C.B.A. (VEK4733)
R4301 82
C4301 10V47
POWER SUPPLY SECTION
SYSTEM CONTROL SECTION
SW6001
TRACKING DOWN
SW6002
TRACKING UP
P6012-1 P6012-2 P6012-3 P6012-4 P6012-5 P6012-6 P6012-7
TO E.V.F. C.B.A.
P6003-1 P6003-2 P6003-3 P6003-4 P6003-5 P6003-6 P6003-7
FP6801-7 FP6801-6 FP6801-5 FP6801-4 FP6801-3 FP6801-2 FP6801-1
TO CAMERA OPERATION C.B.A. IN CAMERA SECTION
P4004-1 P4004-2 P4004-3 P4004-4 P4004-5 P4004-6
AUDIO SECTION
FULL ERASE HEAD
P4003-1 P4003-2 P4003-3 P4003-4
SUPPLY PHOTO
CONTROL HEAD
AUDIO ERASE HEAD
AUDIO HEAD
P4002-1 P4002-2 P4002-3 P4002-4 P4002-5 P4002-6 P4002-7 P4002-8 P4002-9
MIC UNIT
P4001-1 P4001-2 P4001-3
MAIN C.B.A. (VEP06643B)
P6004-1 P6004-2 P6004-3 P6004-4 P6004-5 P6004-6 P6004-7 P6004-8 P6004-9 P6004-10 P6004-11 P6004-12 P6004-13 P6004-14 P6004-15 P6004-16
P6301-1 P6301-2 P6301-3 P6301-4 P6301-5 P6301-6 P6301-7 P6301-8 P6301-9 P6301-10 P6301-11 P6301-12 P6301-13 P6301-14 P6301-15 P6301-16
VTR OPERATION C.B.A. (VEP06592B)
P6302-1 P6302-2 P6302-3 P6302-4 P6302-5 P6302-6 P6302-7 P6302-8 P6302-9
SERVO SECTION
P2001-1 P2001-2 P2001-3 P2001-4 P2001-5 P2001-6 P2001-7 P2001-8 P2001-9 P2001-10 P2001-11 P2001-12 P2001-13 P2001-14 P2001-15 P2001-16 P2001-17 P2001-18 P2001-19 P2001-20 P2001-21 P2001-22 P2001-23 P2001-24 P2001-25 P2001-26
P2601-1 P2601-2 P2601-3 P2601-4 P2601-5 P2601-6 P2601-7 P2601-8 P2601-9 P2601-10 P2601-11 P2601-12 P2601-13 P2601-14 P2601-15 P2601-16 P2601-17 P2601-18 P2601-19 P2601-20 P2601-21 P2601-22 P2601-23 P2601-24 P2601-26
P2603-1 P2603-2 P2603-3 P2603-4 P2603-5 P2603-6 P2603-7 P2603-8 P2603-9 P2603-10 P2603-11 P2603-12 P2603-13 P2603-14 P2603-15 P2603-16
CAPSTAN MOTOR
P2602-1 P2602-2 P2602-3 P2602-4 P2602-5 P2602-6 P2602-7 P2602-8 P2602-9 P2602-10 P2602-11 P2602-12 P2602-13 P2602-14 P2602-15
CYLINDER MOTOR
MOTOR DRIVE C.B.A. (VEP02349A)
P2605-1 P2605-2
CASSETTE DOWN SW
P2606-1 P2606-2
SAFETY TAB SW
P2604-1 P2604-2
SENSOR LED
P5002-1 P5002-2 P5002-3 P5002-4 P5002-5 P5002-6 P5002-7 P5002-8 P5002-9 P5002-10 P5002-11 P5002-12
HEAD AMP C.B.A. (VEP05147A)
P5001-1 P5001-2 P5001-3 P5001-4 P5001-5 P5001-6 P5001-7 P5001-8 P5001-9 P5001-10 P5001-11 P5001-12 P5001-13 P5001-14 P5001-15 P5001-16 P5001-17 P5001-18 P5001-19 P5001-20
P3502-1 P3502-2 P3502-3 P3502-4 P3502-5 P3502-6 P3502-7 P3502-8 P3502-9 P3502-10 P3502-11 P3502-12 P3502-13 P3502-14 P3502-15 P3502-16 P3502-17 P3502-18 P3502-19 P3502-20
SUB VIDEO SECTION
P3501-1 P3501-2 P3501-3 P3501-4 P3501-5 P3501-6 P3501-7 P3501-8 P3501-9 P3501-10 P3501-11 P3501-12 P3501-13 P3501-14 P3501-15 P3501-16 P3501-17 P3501-18 P3501-19 P3501-20 P3501-21 P3501-22 P3501-23 P3501-24
P3001-1 P3001-2 P3001-3 P3001-4 P3001-5 P3001-6 P3001-7 P3001-8 P3001-9 P3001-10 P3001-11 P3001-12 P3001-13 P3001-14 P3001-15 P3001-16 P3001-17 P3001-18 P3001-19 P3001-20 P3001-21 P3001-22 P3001-23 P3001-24
P3002-1 P3002-2 P3002-3 P3002-4 P3002-5
LUMINANCE & CHROMINANCE PACK C.B.A. (VEP03769A)

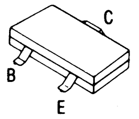
IMPORTANT SAFETY NOTICE:
COMPONENTS IDENTIFIED WITH THE MARK ⚠ HAVE THE SPECIAL CHARACTERISTICS FOR SAFETY. WHEN REPLACING ANY OF THESE COMPONENTS, USE ONLY THE SAME TYPE.

NOTE: DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING. WHEN YOU ORDER A PART, PLEASE REFER TO PARTS LIST.

3-37. ICs & TRs INFORMATION



AN1358S
RC4558M
NJM3415M
MST001MS
LM2903M
LM2904M
TL8809F



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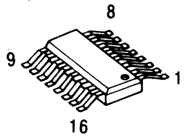
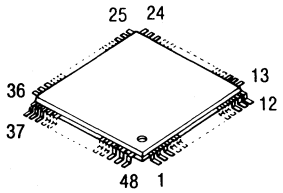
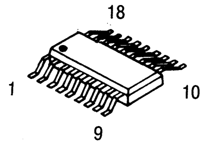
2SA1255
2SA1532
2SA1610
2SB710
2SB956
2SB956X
2SB970
2SB970X
2SB1218
2SB1219
2SC3138
2SC3930
2SC3931
2SC4176
2SD968A
2SD1328
2SD1819
2SD1820



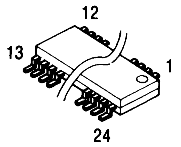
MN3819S
MN3820S
µPD4094BG
AN2012S
TL1453CNS
RZ4052BM
AN2514S
TDM3700TP1
AN3580SB


25 24
36
37
13
12
48 1

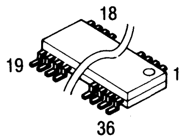
AN2154FAP
AN2254FAP
AN2584NFAP
AN3346FBP



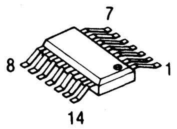
AN2445N



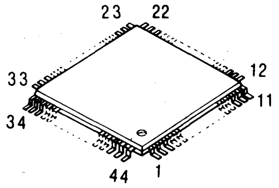
BA6456FS
AN6397S



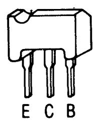
µPC2309AGS



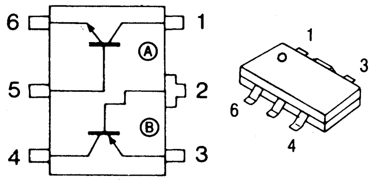
S3500A3
LM2902M
AN1324NS


23 22
33
34
12
11
44 1

MN67621F
MN67461VDJF
MN73912XWA



2SD2177S


6
5
4
1
2
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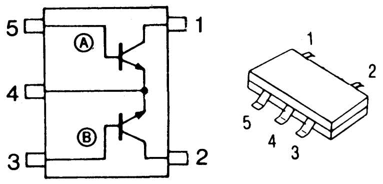
Ⓐ
Ⓑ
1
3
6
4

XN4601


5
4
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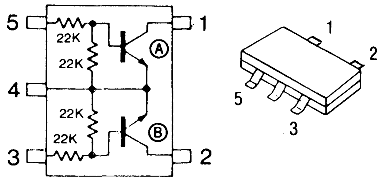
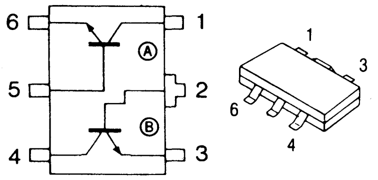
2
Ⓐ
Ⓑ
1
2
5
4
3

XN1501
FMW1


5
4
3
1
2
22K
22K
22K
22K
Ⓐ
Ⓑ
1
2
5
3

XN1212
FMG1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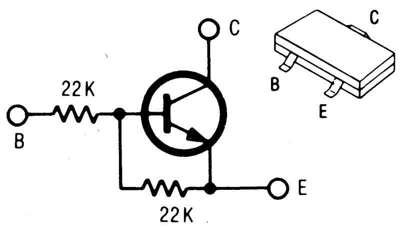
Ⓐ
Ⓑ
1
3
6
4

XN4501
XN4504


C
22K
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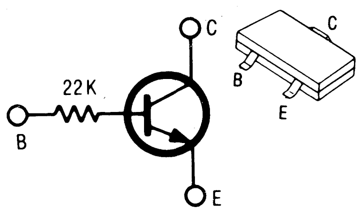
22K
C
B
E

UN5212
GA1F4M



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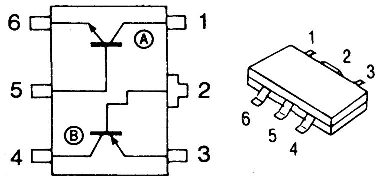
GA1F4Z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1
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Ⓐ
Ⓑ
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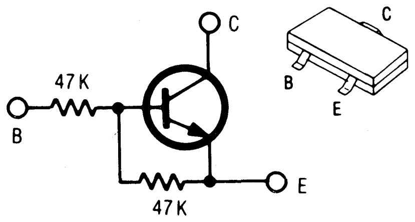
2
3
6
5
4

XN4608
XN4608X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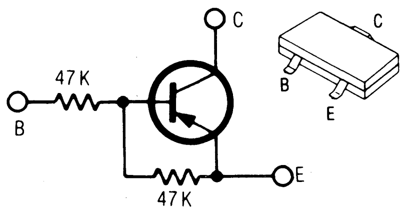
E
47K
C
B
E

UN5213
GA1L4M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47K
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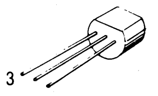
47K
C
B
E

UN5113
GN1L4M

Back Page:
CAMERA & VTR INTERCONNECTION Section



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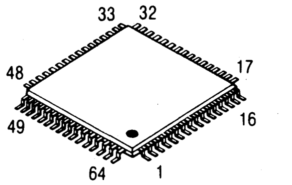
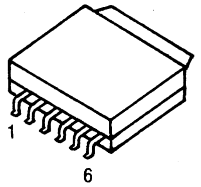

33 32
48
49
17
16
64 1

MN15867VNY



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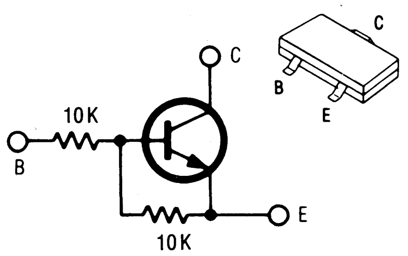
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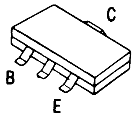
B
E
10K
C
B
E

UN2211
DTA114EK



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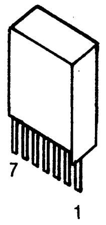
2SB798



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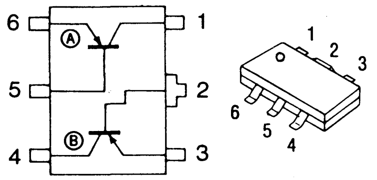
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1
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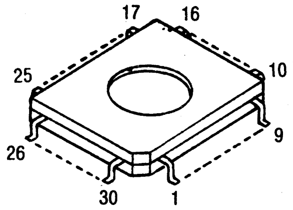
3
Ⓐ
Ⓑ
1
2
3
6
5
4

XN4401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9
30 1

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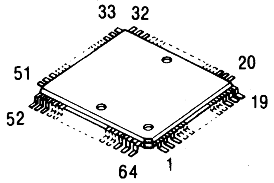
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51
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20
19
64 1

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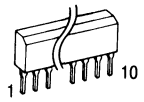

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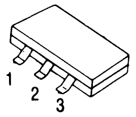

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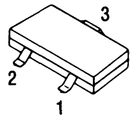

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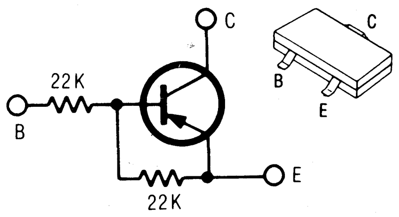
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22K
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E
22K
C
B
E

UN5112
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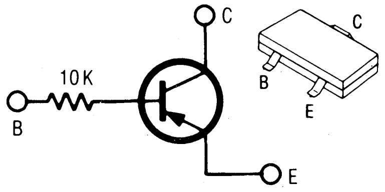

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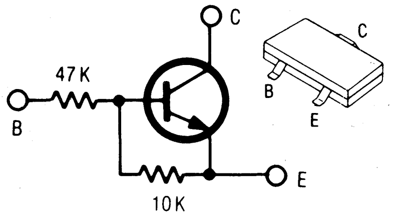
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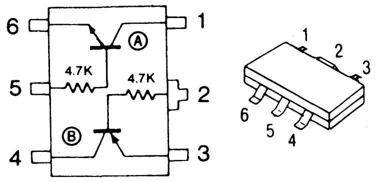
47K
B
E
10K
C
B
E

UN521E
GA1L4L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5
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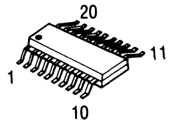
3
Ⓐ
Ⓑ
4.7K
4.7K
1
2
3
6
5
4

XN4316



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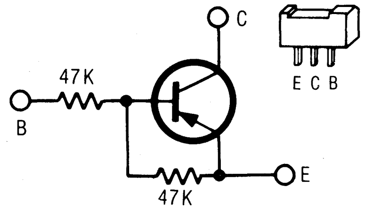
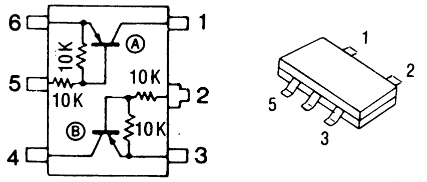
µPD6145G617A
AN6398S


C
E C B
47K
B
E
47K

UN1113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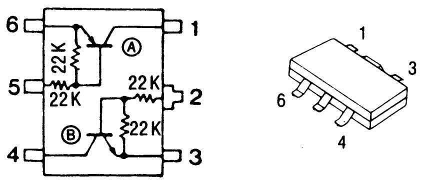
2
3
10K
10K
10K
10K
Ⓐ
Ⓑ
1
2
3
5

XN4111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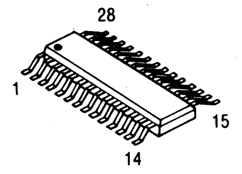
2
3
22K
22K
22K
22K
Ⓐ
Ⓑ
1
3
4
6

IMD2



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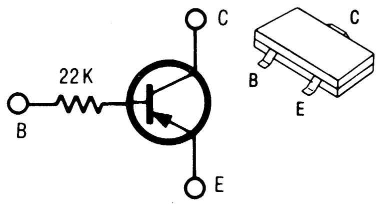

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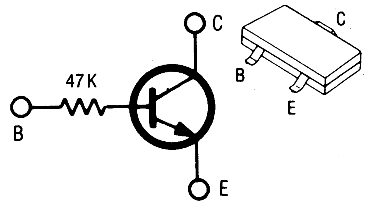

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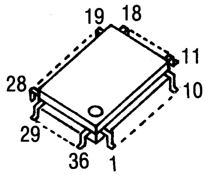
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10
29
36
1

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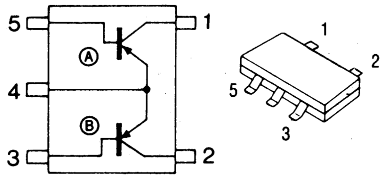
AN3819S



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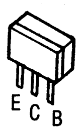
FMS1



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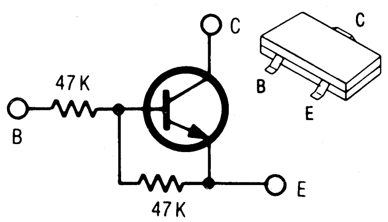
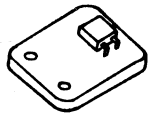

47K
47K
B
C
E
C
B
E

UN5213
GA1L4M



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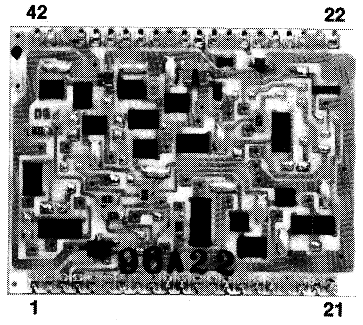

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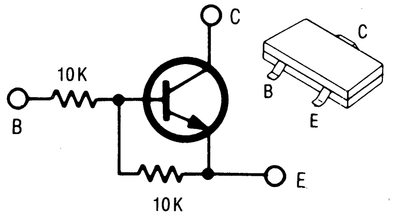
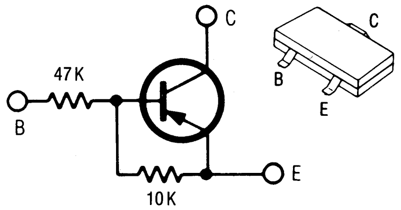

10K
10K
B
C
E
C
B
E

UN5211
GA1A4M


47K
10K
B
C
E
C
B
E

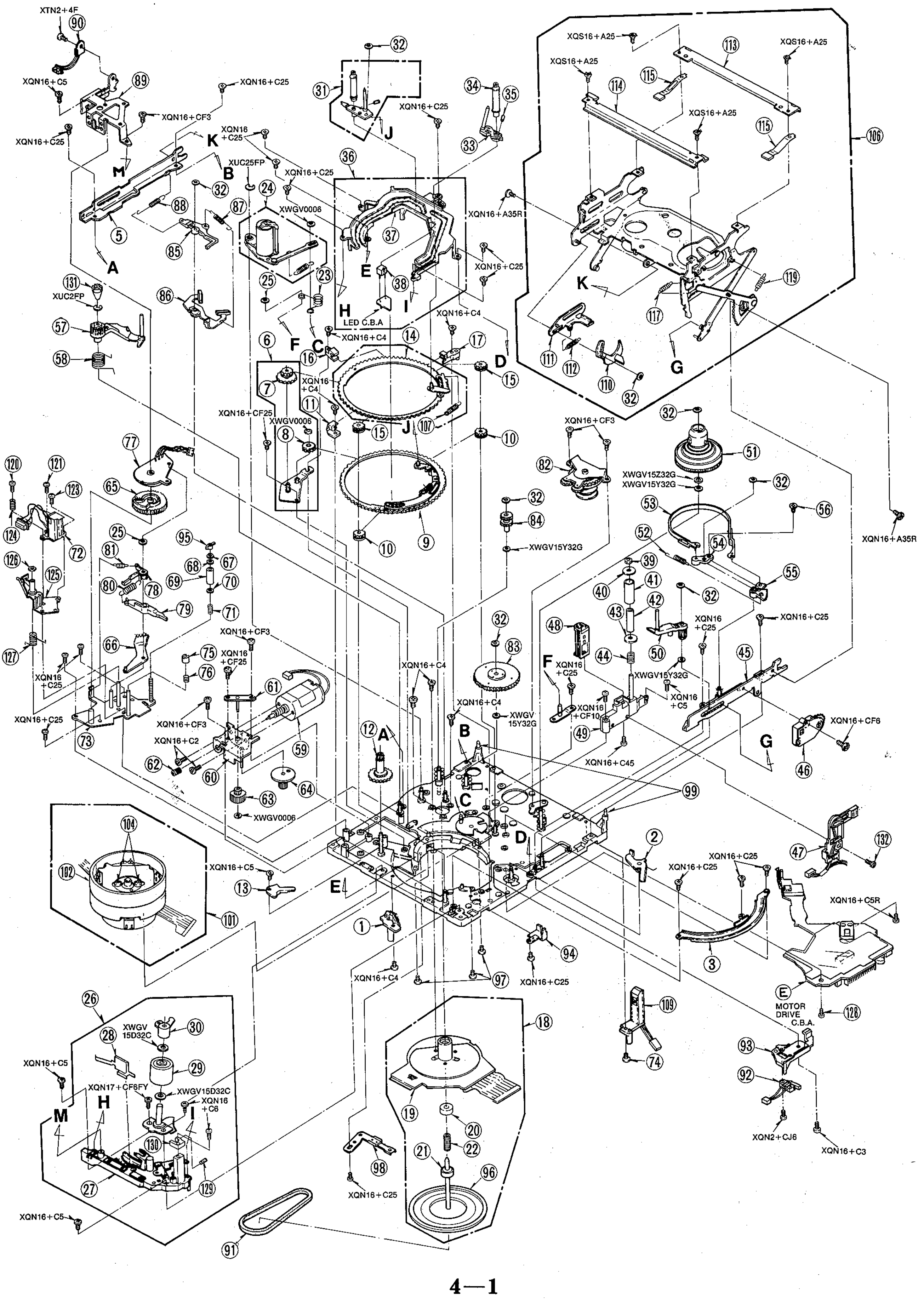
UN511E
GN1L4L

Memo

SECTION 4
EXPLODED VIEWS & PARTS LIST

4-1. EXPLODED VIEWS

❶ VTR MECHANISM SECTION



XTN2+4F
(90)
XQN16+C5
(89)
XQN16+C25
XQN16+CF3
XQN16+C25
K
M
B
XQN16
+C25
XUC25FP
(5)
(88)
(32)
(87)
(85)
A
(131)
XUC2FP
(57)
(58)
(86)
(32)
(31)
J
(34)
(35)
(33)
XQN16+C25
(36)
XQN16+C25
(24)
XWGV0006
(37)
E
(38)
H
LED C.B.A
I
(25)
(23)
F
C
(16)
XQN16+C4
(14)
(17)
D
(15)
(6)
(7)
XQN16
+C4
(11)
XQN16+CF25
XWGV0006
(8)
(15)
J
(107)
(10)
(9)
(10)
XQN16+C4
XQN16+A35R
XQN16+C25
XQS16+A25
XQS16+A25
(113)
XQS16+A25
(114)
(115)
XQS16+A25
(115)
(106)
K
(119)
(117)
(111)
(112)
(110)
(32)
G
(32)
(51)
XQN16+CF3
(82)
XWGV15Z32G
XWGV15Y32G
(32)
(56)
(53)
(52)
(54)
(55)
XQN16+A35R
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(84)
XWGV15Y32G
(77)
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(71)
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(66)
XQN16+CF3
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XQN16
+CF25
(76)
XQN16
+C25
XQN16+C25
(73)
(61)
XQN16+CF3
XQN16+C2
(62)
(60)
(59)
(12)
A
(64)
(63)
XWGV0006
XQN16+C4
XQN16+C4
XWGV
15Y32G
B
C
D
(99)
(39)
(40)
(41)
(42)
(43)
(32)
(48)
(50)
XQN16
+C25
XQN16+C25
(44)
XWGV15Y32G
XQN16
+C5
(45)
F
XQN16
+C25
XQN16
+CF10
(49)
XQN16+C45
(46)
XQN16+CF6
G
(32)
(83)
(104)
(102)
(101)
XQN16+C5
(13)
E
(1)
(2)
XQN16+C25
XQN16+C25
(47)
(132)
(3)
XQN16+C5R
(94)
XQN16+C25
XQN16+C4
(97)
E
MOTOR
DRIVE
C.B.A.
(128)
(18)
(109)
(74)
(93)
(92)
XQN2+CJ6
XQN16+C3
(26)
XWGV
15D32C
(30)
(28)
(29)
XQN16+C5
XQN17+CF6FY
XWGV15D32C
XQN16
+C6
M
H
I
(130)
(27)
(129)
(19)
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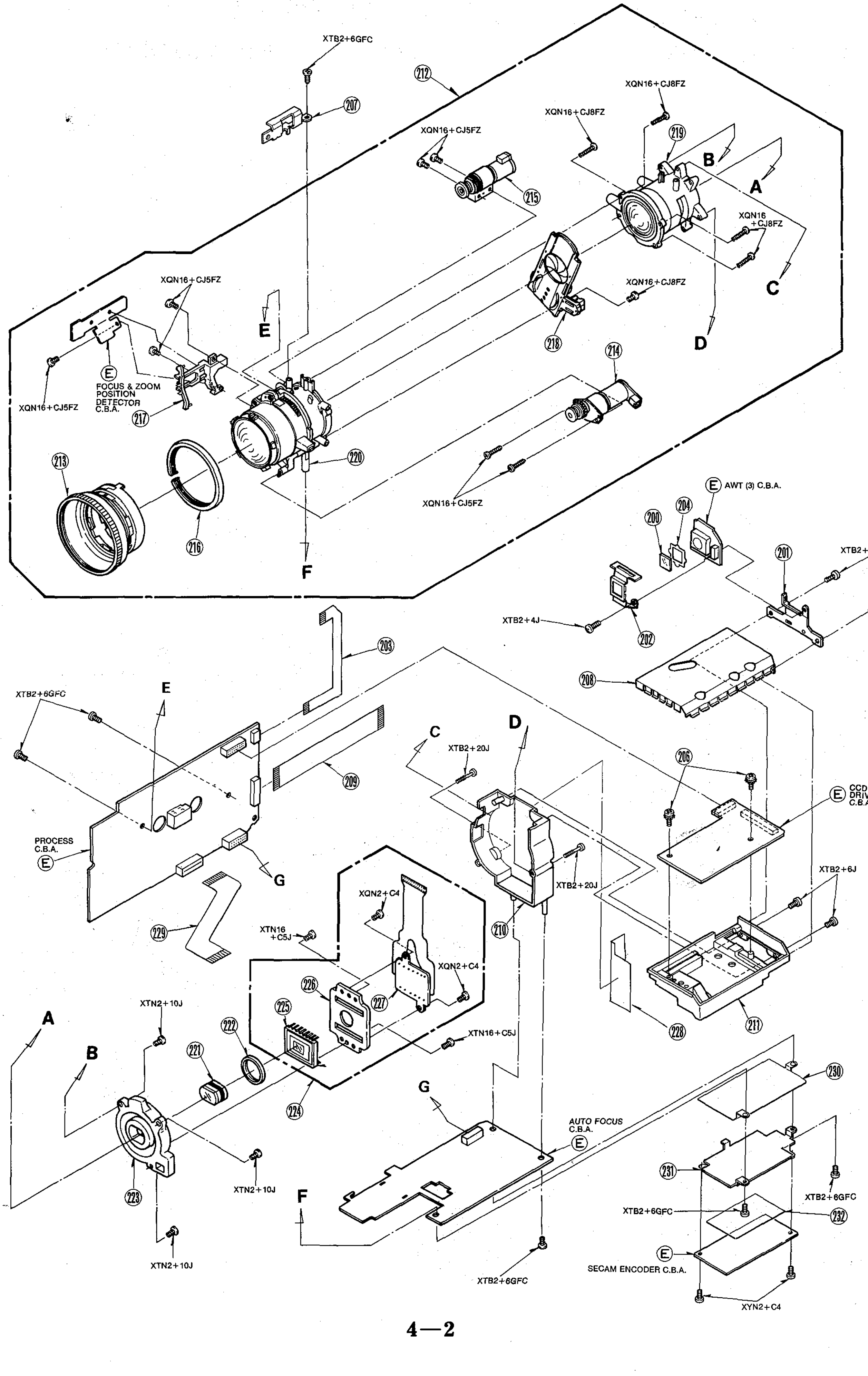
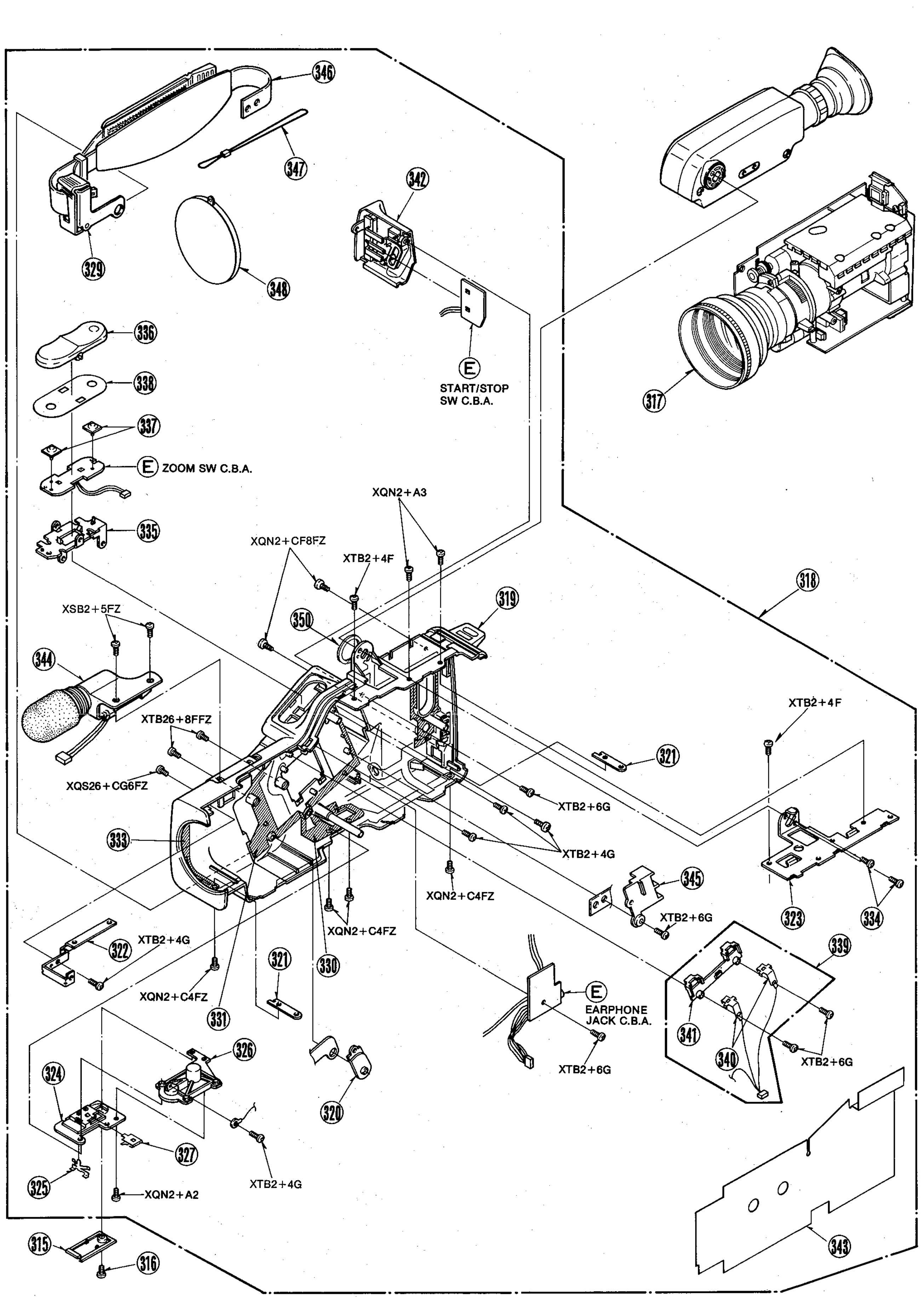
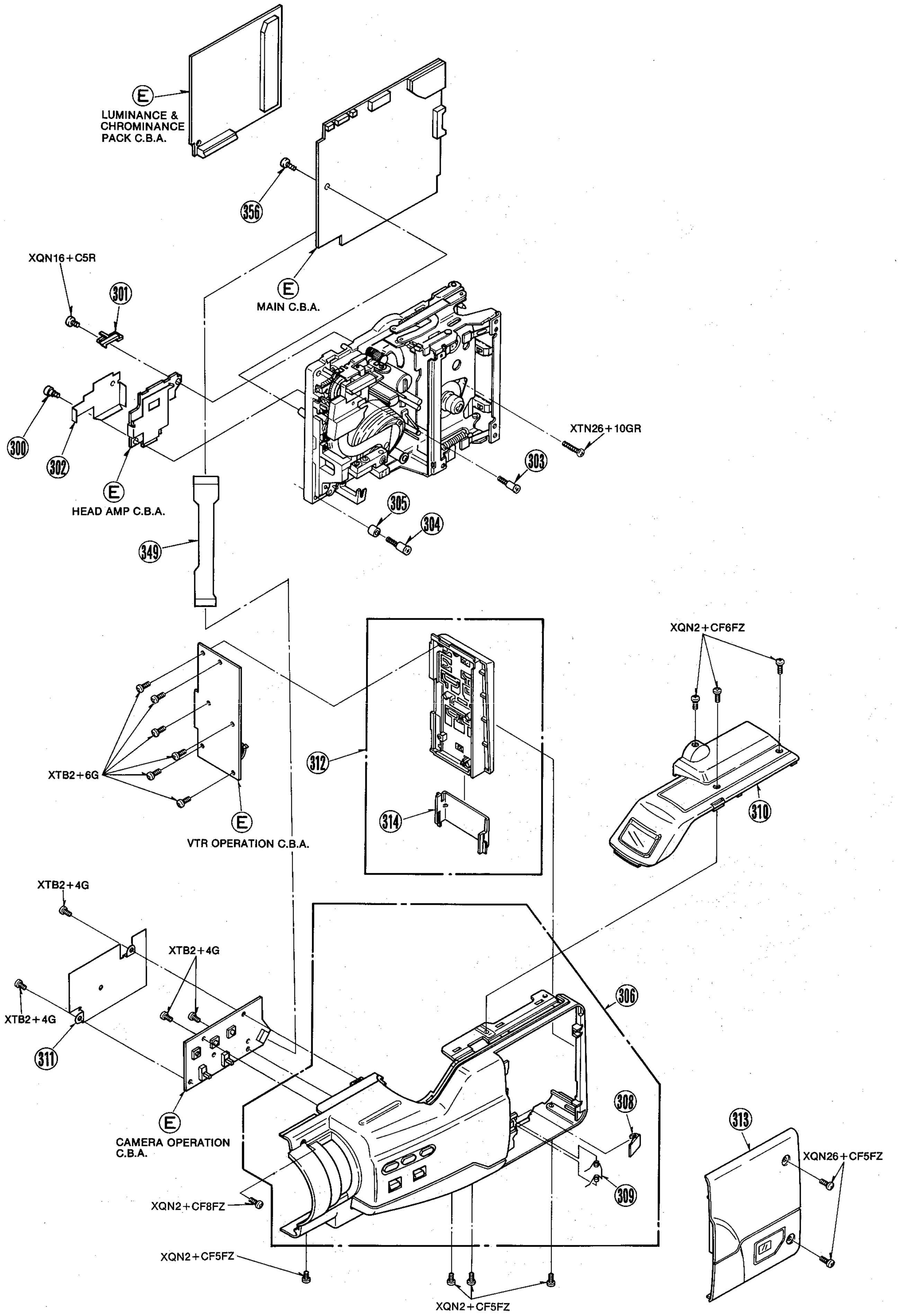
(22)
(96)
(98)
XQN16+C25
XQN16+C5
(91)

❷ CAMERA LENS SECTION

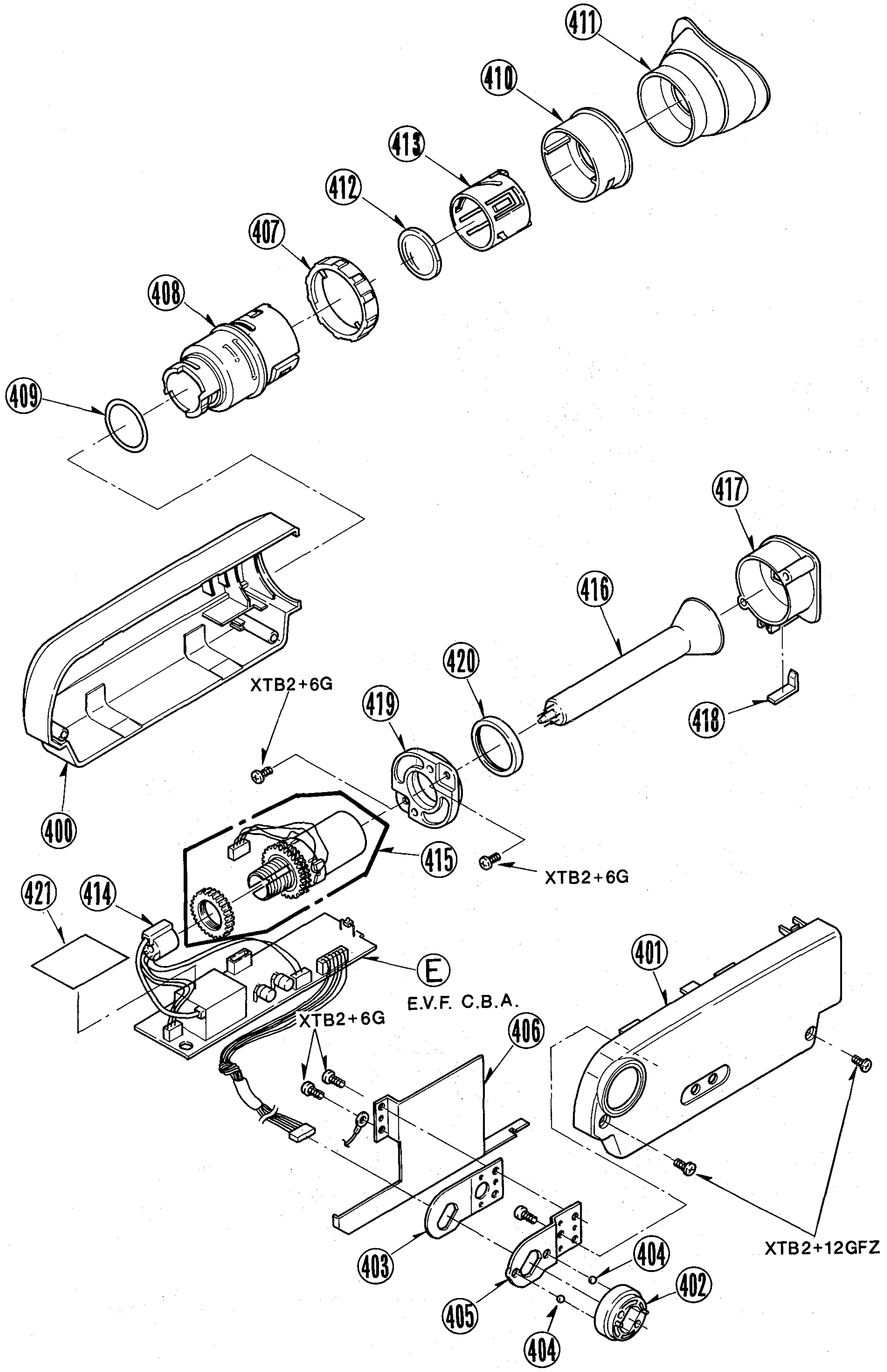

XTB2+6GFC
212
207
XQN16+CJ8FZ
XQN16+CJ8FZ
XQN16+CJ5FZ
219
B
A
215
XQN16
+CJ8FZ
C
XQN16+CJ8FZ
XQN16+CJ5FZ
E
218
D
214
E
FOCUS & ZOOM
POSITION
DETECTOR
C.B.A.
XQN16+CJ5FZ
217
213
220
XQN16+CJ5FZ
216
F
E AWT (3) C.B.A.
200
204
201
XTB2+6GFC
XTB2+4J
202
203
208
XTB2+6GFC
E
C
D
XTB2+20J
209
206
E CCD DRIVE C.B.A.
PROCESS
C.B.A.
E
G
XTB2+20J
XTB2+6J
XQN2+C4
XTN16
+C5J
210
229
XQN2+C4
226
227
228
211
225
XTN2+10J
222
A
XTN16+C5J
221
B
224
230
G
AUTO FOCUS
C.B.A.
E
223
XTN2+10J
231
XTB2+6GFC
F
XTB2+6GFC
232
XTN2+10J
E
SECAM ENCODER C.B.A.
XTB2+6GFC
XYN2+C4

❸ CHASSIS & FRAME SECTION


346
347
329
348
342
E
START/STOP SW C.B.A.
317
336
338
337
E ZOOM SW C.B.A.
335
XQN2+A3
XQN2+CF8FZ
XTB2+4F
319
350
318
XSB2+5FZ
344
XTB26+8FFZ
XQS26+CG6FZ
XTB2+4F
321
XTB2+6G
XTB2+4G
333
XQN2+C4FZ
345
XTB2+6G
323
334
339
322
XTB2+4G
321
330
XQN2+C4FZ
XQN2+C4FZ
331
E
EARPHONE JACK C.B.A.
341
340
XTB2+6G
XTB2+6G
324
326
320
327
325
XQN2+A2
XTB2+4G
343
315
316


E
LUMINANCE & CHROMINANCE PACK C.B.A.
356
XQN16+C5R
301
E
MAIN C.B.A.
XTN26+10GR
300
302
E
HEAD AMP C.B.A.
303
305
304
349
XQN2+CF6FZ
XTB2+6G
312
314
E
VTR OPERATION C.B.A.
310
XTB2+4G
XTB2+4G
XTB2+4G
311
306
E
CAMERA OPERATION C.B.A.
308
313
XQN26+CF5FZ
309
XQN2+CF8FZ
XQN2+CF5FZ
XQN2+CF5FZ

❹ E.V.F. SECTION



411
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416
420
419
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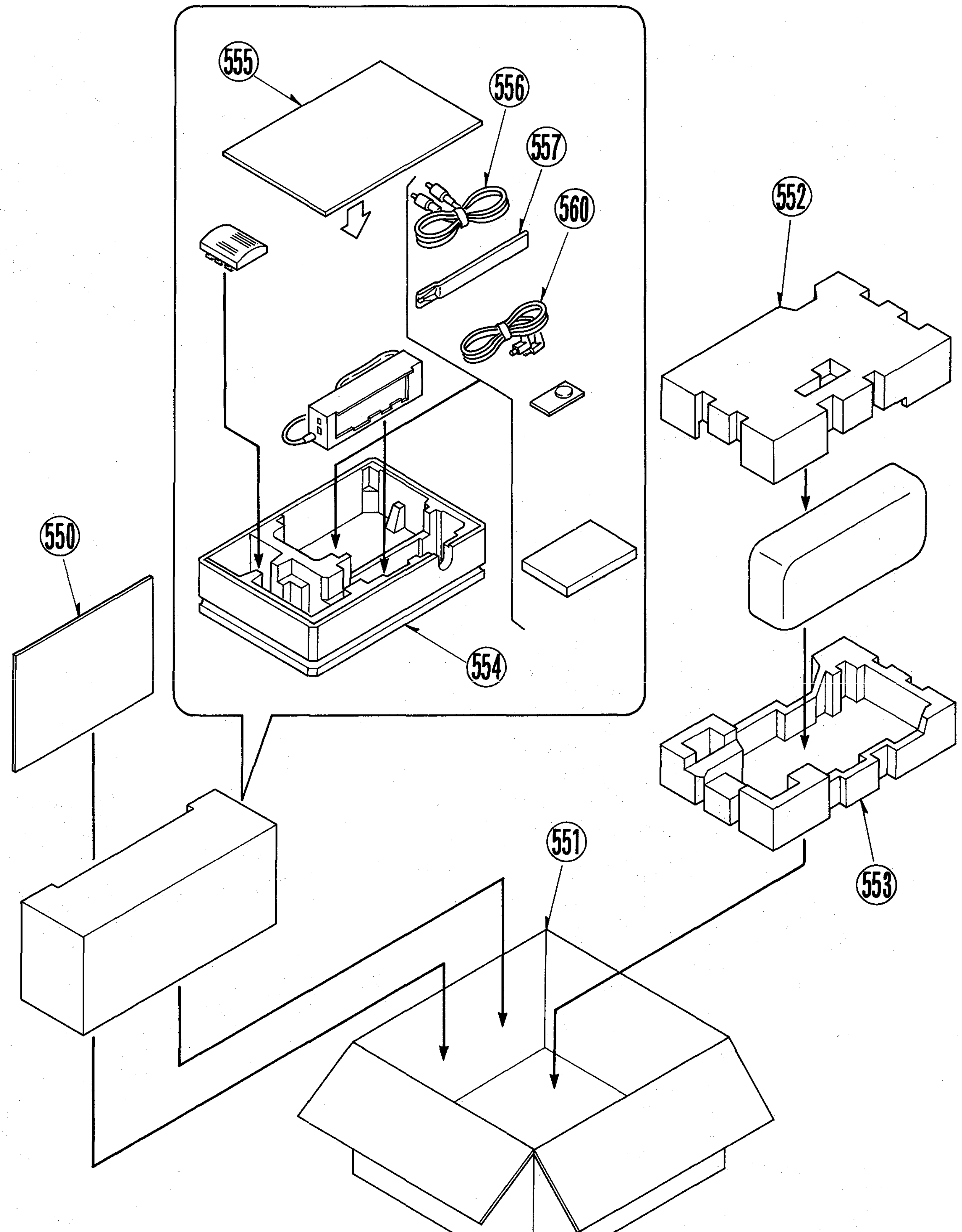
XTB2+6G
400
415
XTB2+6G
421
414
E
E.V.F. C.B.A.
XTB2+6G
406
401
XTB2+12GFZ
403
404
402
405
404

❺ PACKING PARTS & ACCESSORIES SECTION



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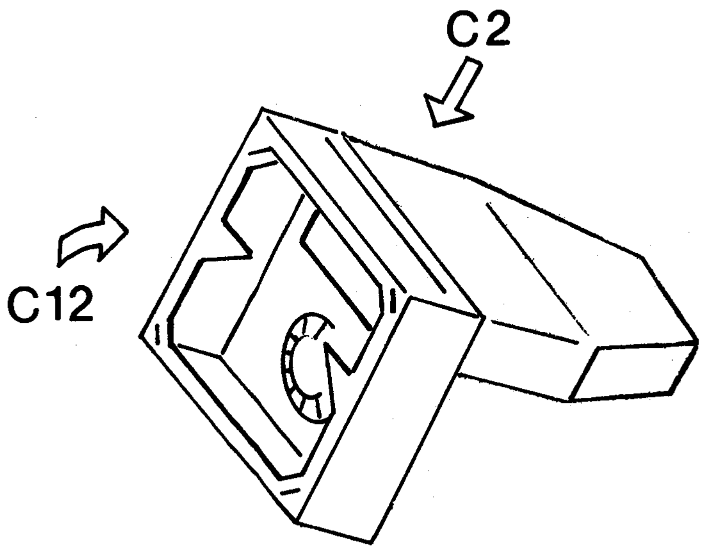
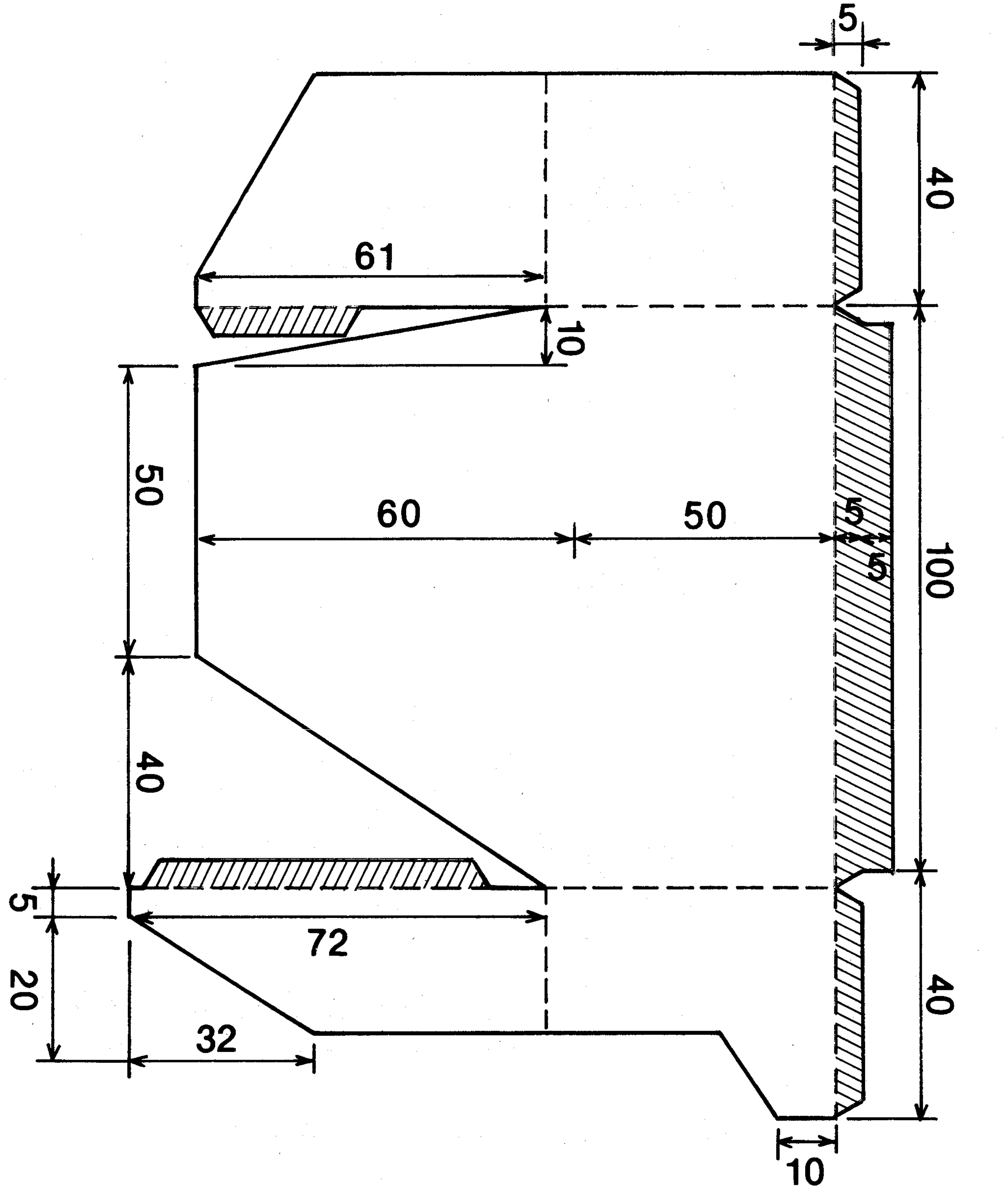
553



[ASSEMBLING PROCEDURE]

1. MAKE THE PHOTO-COPY FROM SERVICE MANUAL.
2. PASTE THE PHOTO-COPY AND THICK PAPER TOGETHER.
3. CUT-THE " —— " LINE.
4. FOLD THE "– – –" LINE.
5. PASTE IT ON THE " ▨ " PART AND ASSEMBLE IT AS SHOWN NEAR ILLUSTRATION.

NOTE: IT IS BETTER TO PAINT THE INSIDE OF FIXTURE BY BLACK COLOUR TO AVOIDE THE REFLECTION OF LIGHT AND CHANGE OF COLOUR TEMPERATURE.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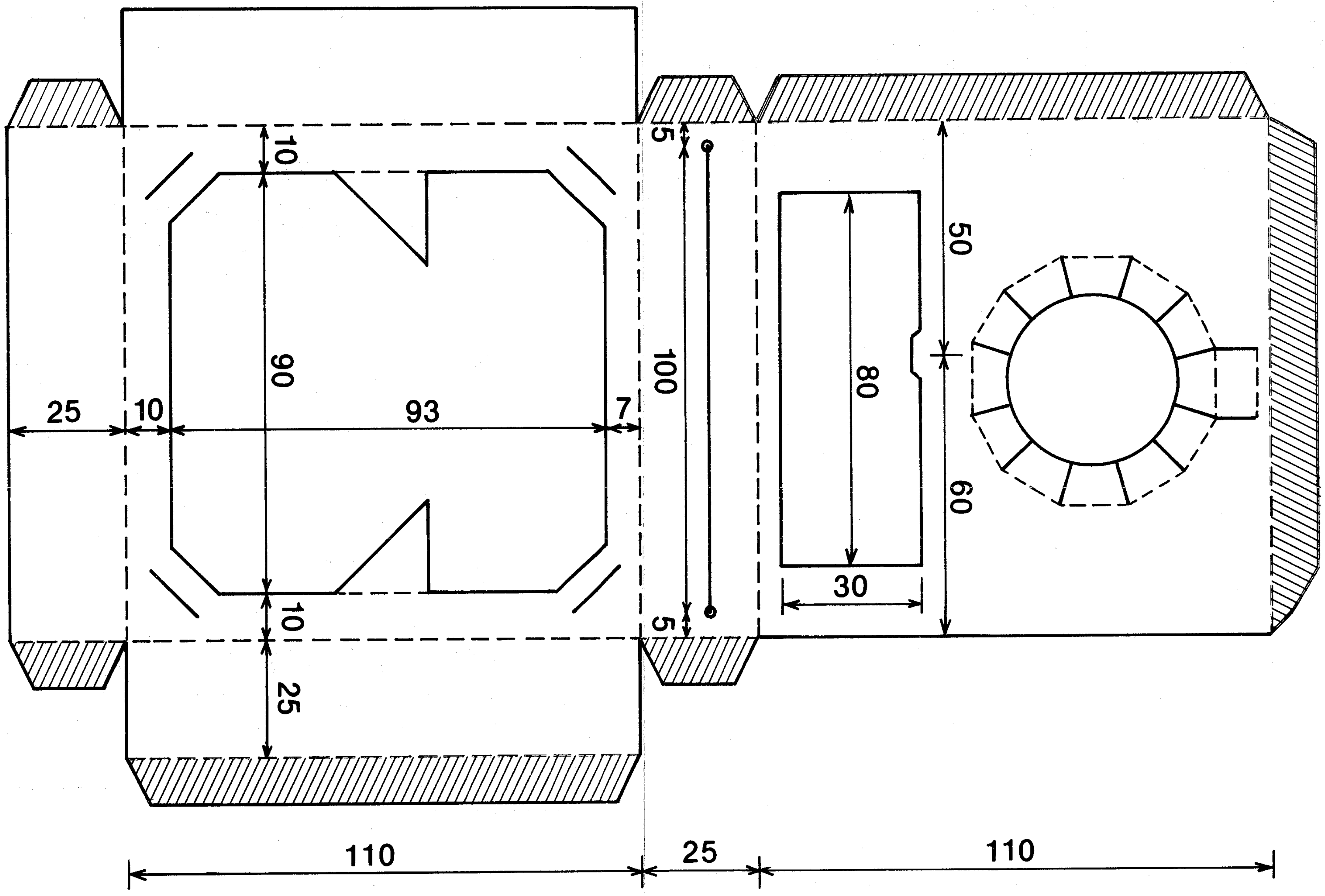
NOTE: THIS ILLUSTRATION IS DRAWN BY REAL SIZE.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NOTE: THIS ILLUSTRATION IS DRAWN BY REAL SIZE.

4-2. MECHANICAL REPLACEMENT PARTS LIST

Note:1.* Be sure to make your orders of replacement parts according to this list.
2. IMPORTANT SAFETY NOTICE
Components identified with the mark <!> have the special characteristics for safety. When replacing any of these components,use only the same type.

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
1(1)		VMD1100	LOADING GUIDE (T)	1	
2(1)		VXL1771	EJECT LEVER UNIT	1	
3(1)		VMD1077	LOADING GUIDE (S)	1	
4(1)		VMD1429	CASSETTE SUPPORT PLATE	1	
5(1)		VMA7766	CASSETTE STAND (T)	1	
6(1)		VXA3052	LOADING GEAR BASE UNIT	1	
7(1)		VDG0410	LOADING GEAR (S)	1	
8(1)		VDG0411	LOADING GEAR (T)	1	
9(1)		VXA3037	LOADING RING (T) UNIT	1	
10(1)		VDG0409	RING GUIDE GEAR (T)	2	
11(1)		VMD1263	RING GUIDE (2)	1	
12(1)		VDG0499	TERMINAL GEAR	1	
13(1)		VMD1265	RING LIMITER	1	
14(1)		VXA3038	LOADING RING (S) UNIT	1	
15(1)		VDG0408	RING GUIDE GEAR (S)	2	
16(1)		VMD1262	RING GUIDE (1)	1	
17(1)		VMD1264	RING GUIDE (3)	1	
18(1)		VEM0284	CAPSTAM MOTOR UNIT	1	
19(1)		VEK3345	STATOR UNIT	1	
20(1)		VDB0898	UPPER BEARING	1	
21(1)		VDB0899	UNDER BEARING	1	
22(1)		VMB1173	THRUST SPRING	1	
24(1)		VXL1945	PRESSURE LEVER UNIT	1	
25(1)		VMX1042	CUT WASHER (B)	2	
26(1)		VXA3845	V STOPPER BASE UNIT	1	
27(1)		VMD1446	V STOPPER BASE	1	
28(1)		VMC0360	PRESSURE PLATE	1	
29(1)		VDP1282	IMPEDANCE ROLLER	1	
30(1)		VMD1407	SUPPLY UPPER LIMITER	1	
31(1)		VXA3965	SHAFT HOLDER (T) UNIT	1	
32(1)		VMX1061	CUT WASHER (A)	8	
33(1)		VXA3064	SHAFT HOLDER S1 UNIT	1	
34(1)		VXJ0062	S1 ROLLER POST UNIT	1	
35(1)		VHD0392	SCREW	1	
36(1)		VXA3846	LOADING GUIDE UNIT	1	
37(1)		VMD1272	LOADING GUIDE	1	
38(1)		TLN107A	SENSOR LED	1	
39(1)		VHN0047	NUT	1	
40(1)		VMX1734	S1 WASHER	1	
41(1)		VDP1292	S1 ROLLER	1	
42(1)		VMX1628	S1 COLLAR	1	
43(1)		VMX1690	S1 LOWER LIMITER	1	
44(1)		VMB2038	S1 SPRING	1	
45(1)		VXA3844	CASSETTE STAND (S) 1 UNIT	1	
46(1)		VXP0891	DAMPER UNIT	1	
47(1)		VEK4562	TAPE END DETECTION UNIT	1	
48(1)		VBS0044	FE HEAD	1	
49(1)		VXA3851	ERASE HEAD BASE (1) UNIT	1	
50(1)		VXL1944	TENSION ARM UNIT	1	
51(1)		VXR0175	SUPPLY REEL TABLE	1	
52(1)		VMB1868	TENSION SPRING	1	
53(1)		VXZ0249	TENSION BAND UNIT	1	
54(1)		VML2281	BAND ARM	1	
55(1)		VMD1082	BAND ADJUSTMENT PIECE	1	
56(1)		VHD0390	BAND ARM SCREW	1	
57(1)		VXL1789	TAPE GUIDE ARM F UNIT	1	
58(1)		VMB1707	TAPE GUIDE ARM SPRING	1	
59(1)		VEM0341	LOADING MOTOR (1) UNIT	1	
60(1)		VXA3374	LOADING MOTOR BRACKET UNIT	1	
61(1)		VXA3375	MOTOR GEAR BASE UNIT	1	
62(1)		VHD0442	WORM ADJUSTMENT SCREW	1	
63(1)		VDG0495	MOTOR GEAR A	1	
64(1)		VDG0494	MOTOR GEAR B	1	
65(1)		VDK0017	CONTROL CAM	1	
66(1)		VXP0904	SECTOR GEAR UNIT	1	
67(1)		VHN0065	T3 POST NUT	1	
68(1)		VMX1472	T3 POST FLANGE	1	
69(1)		VMX1251A	P1 SPACER	1	
70(1)		VMX1471	T3 POST BOTTOM	1	
71(1)		VMB1716	T3 POST SPRING	1	
72(1)		VED0119	A/C HEAD UNIT	1	
73(1)		VXA3848	A/C HEAD PLATE UNIT	1	
74(1)		VHD0389	SCREW	1	
75(1)		VHN0133	P2 POST ADJUST NUT	1	
76(1)		VMB1995	P2 POST ADJUST SPRING	1	
77(1)		VES0416	MODE SELECT SWITCH	1	
78(1)		VXL1675	TAPE GUIDE LEVER (2) UNIT	1	
79(1)		VML2191	TAPE GUIDE LEVER (1)	1	
80(1)		VMB1971	TAPE GUIDE LEVER SPRING	1	
81(1)		VMB1872	TAPE GUIDE LEVER SPRING (2)	1	
82(1)		VXP0922	IDLER UNIT	1	
83(1)		VXP0890	CLUTCH GEAR (T) UNIT	1	
84(1)		VDG0407	TAKEUP REEL GEAR	1	
85(1)		VML2026	SOFT BRAKE ARM	1	
86(1)		VXL1670	SOFT BRAKE UNIT	1	
87(1)		VMB1710	SOFT BRAKE SPRING (1)	1	
88(1)		VMB1871	SOFT BRAKE SPRING (2)	1	
89(1)		VMA7764	H.A PLATE	1	
90(1)		VEK4635	HUMIDITY (DEW) RESISTOR	1	
91(1)		VDV0170	DRIVE BELT	1	
92(1)		VES0542	CASSETTE DOWN SW	1	
93(1)		VMD1266	CASSETTE DOWN SW HOLDER	1	
94(1)		VMA7112	MR SHIELD COVER	1	
95(1)		VMD1578	T3 POST CAP (3)	1	
96(1)		VXP0873	ROTOR UNIT	1	
97(1)		VHD0389	CYLINDER SCREW	3	
98(1)		VXS0077	EARTH BRUSH UNIT	1	
99(1)		VMS3533	CASSETTE GUIDE PIN	2	
101(1)		VEG0776	CYLINDER UNIT	1	<!>
102(1)		VEH0441	UPPER CYLINDER UNIT	1	<!>
104(1)		VHD0288	UPPER CYLINDER SCREW	2	
106(1)		VXA3852	CASSETTE UP UNIT	1	
107(1)		VMB1714	LOADING RING (S) SPRING	1	
109(1)		VST0099	SAFETY TAB SW	1	
110(1)		VML2289	OPEN LEVER	1	
111(1)		VXL1676	OPEN SLIDE LEVER (1) UNIT	1	
112(1)		VMB1721	OPEN SLIDE LEVER SPRING	1	
113(1)		VMA7772	HOLDER STAY (F)	1	
114(1)		VMA7771	HOLDER STAY (R)	1	
115(1)		VMB2039	CATCH PLATE	2	
117(1)		VMB1860	LOCK SPRING	1	
119(1)		VMB1824	SPRING (S)	1	
120(1)		VHD0525	A/C SCREW	1	
121(1)		VHD0526	ADJUST SCREW	1	
123(1)		VHD0536	AZIMUTH SCREW	1	
124(1)		VMB2036	A/C HEAD SPRING	1	
125(1)		VXL1943	A/C HEAD ARM (1) UNIT	1	
126(1)		VHN0047	NUT	1	
127(1)		VMB2035	A/C SPRING	1	
128(1)		VHD0439	SCREW (A)	1	
129(1)		VHD0537	SCREW	1	
130(1)		VMD1447	V STOPPER	1	
131(1)		VHN0124	ADJUST NUT	1	
132(1)		VHD0568	TAPE END DETECTION UNIT FIXING SCREW	1	
200(2)		VDL0170	IR CUT FILTER	1	
201(2)		VMP1790	AWT FIXING ANGLE	1	
202(2)		VMP1810	AWT HOOK SPRING	1	
203(2)		VWJ0341	AWT FLEXIBLE CORD	1	FP601 - FP302
204(2)		VGQ1660	IR SPACER	1	
206(2)		VHD0398	SENSOR C.B.A. SCREW	2	
207(2)		VMP2064	CAMERA FIXING ANGLE	1	
208(2)		VSC3027	SENSOR FRAME SHIELD PLATE	1	
209(2)		VWJ0305	PROCESS FLEXIBLE CORD	1	FP306 - P1002
210(2)		VJF0654	SENSOR FRAME	1	
211(2)		VMD1256	SENSOR C.B.A. FRAME	1	
212(2)		VXW0056	LENS UNIT	1	
213(2)		VDW0104	FOCUS RING	1	
214(2)		VEM0318	FOCUS MOTOR UNIT	1	
215(2)		VEM0319	ZOOM MOTOR UNIT	1	
216(2)		VGF0247	FOCUS FASTENER	1	
217(2)		VJF0661	POSITION SENSOR HOLDER	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
218(2)		VXL1635	IRIS UNIT	1	
219(2)		VXQ0057	LENS (1) UMIT	1	
220(2)		VXP1118	LENS (2) UNIT	1	
221(2)		VDL0143	CHRYSTAL FILTER	1	
222(2)		VMX1276	CCD CUSHION	1	
223(2)		VXQ0017	ACTUATER	1	
224(2)		VEK4724	CCD UNIT	1	
225(2)		MN3745FC	CCD	1	
226(2)		VMA7183	CCD PLATE	1	
227(2)		VWJ0340	CCD FLEXIBLE CORD	1	
228(2)		VSC2976	INSULATING SHIELD BARRIER	1	
229(2)		VWJ0437	SECAM ENCODER FLEXIBLE CORD	1	
230(2)		VMZ1474	D SHIELD BARRIER	1	
231(2)		VSC2954	D SHIELD ANGLE	1	
232(2)		VMZ1635	SHIELD BARRIER	1	
300(3)		VHD0439	SCREW (A)	1	
301(3)		VMD1268	SPACER	1	
302(3)		VSC2945	HEAD AMP UPPER SHIELD	1	
303(3)		VHD0451	SCREW	1	
304(3)		VHD0395	SCREW	1	
305(3)		VMX1332	SCREW SPACER	1	
306(3)		VYK3137	SIDE CASE (R) (1) UNIT	1	
308(3)		VML2422	SAFETY LEVER	1	
309(3)		VMB1986	SAFETY SPRING	1	
310(3)		VYK2790	TOP CASE UNIT	1	
311(3)		VMZ1473	CAMERA OPERATION BARRIER	1	
312(3)		VYK3140	VTR OPERATION CASE (1) UNIT	1	
313(3)		VGP2596	CASSETTE COVER	1	
314(3)		VKF1504	CURSOR	1	
315(3)		VKF1142	BATTERY LID	1	
316(3)		VHD0599	SCREW	1	
317(3)		VDW0103	LENS FOOD	1	
318(3)		VYK3136	SIDE CASE (L) UNIT	1	
319(3)		VYK3138	SIDE CASE (L) (1) UNIT	1	
320(3)		VGQ1915	BATTERY LOCK HOLDER	1	
321(3)		VMP1789	FIXING ANGLE (B)	2	
322(3)		VMP2421	MIC FIXING ANGLE	1	
323(3)		VMP2422	EVF FIXING ANGLE	1	
324(3)		VKM1549	BATTERY BRACKET	1	
325(3)		VMC0399	BATTERY TERMINAL (B)	1	
326(3)		VMD1344	TRIPOD FIXING BRACKET	1	
327(3)		VMC0326	BATTERY TERMINAL (A)	1	
329(3)		VXA3870	GRIP BELT ANGLE UNIT	1	
330(3)		VGQ1951	ESD BARRIER (4)	1	
331(3)		VGQ1954	ESD BARRIER (7)	1	
333(3)		VGQ2215	ESD BARRIER (10)	1	
334(3)		VHD0584	SCREW	2	
335(3)		VGQ1930	ZOOM BUTTON HOLDER	1	
336(3)		VGU4389	ZOOM BUTTON	1	
337(3)		VMG0358	ZOOM RUBBER SWITCH	2	
338(3)		VGQ1750	ZOOM BUTTON SHEET	1	
339(3)		VYK2318	BATTERY TERMINAL UNIT	1	
340(3)		VMC0403	BATTERY TERMINAL PLATE	2	
341(3)		VGQ1608	BATTERY TERMINAL HOLDER	1	
342(3)		VYK2810	GRIP BELT HOOK COVER UNIT	1	
343(3)		VMZ1472	SHIELD BARRIER	1	
344(3)		VEK4637	MIC UNIT	1	
345(3)		VGQ1929	GRIP BELT SUPPORT ANGLE	1	
346(3)		VYC0283	GRIP BELT UNIT	1	
347(3)		VGQ1349	HOOD STRAP	1	
348(3)		VKF1346	HOOD CAP	1	
349(3)		VWJ0399	FLEXIBLE CARD	1	
350(3)		VMX1694	E.V.F. SPACER	1	
356(3)		VHD0440	MAIN SCREW	1	
400(4)		VKM2063	E.V.F. SIDE CASE (L)	1	
401(4)		VKM1892	E.V.F. SIDE CASE (R)	1	
402(4)		VKC0376	ROTALY PIECE	1	
403(4)		VMC0596	ROTALY LOCK SPRING	1	
404(4)		VMP2327	STEEL BALL	2	
405(4)		VMP2668	STEEL BALL FIXING ANGLE	1	
406(4)		VMZ1535	SHIELD PLATE	1	
407(4)		VJF0753	EYESIGHT CONNECTION RING	1	
408(4)		VKM1893	EYESIGHT CONNECTION CASE	1	
409(4)		VMX1322	O RING	1	
410(4)		VJF0743	EYE CAP HOLDER	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
411(4)		VMG0408	EYE CAP	1	
412(4)		VDL0145	E.V.F. LENS	1	
413(4)		VJF0827	E.V.F. LENS HOLDER	1	
414(4)		VEE5792	CRT SOKET UNIT	1	
415(4)		ELY07V552B	DY	1	
416(4)		M01JVV47WB	CRT	1	
417(4)		VGF0336	CRT MASKING	1	
418(4)		VGL0405	LED PANEL LIGHT	1	
419(4)		VJF0742	CRT HOLDER	1	
420(4)		VMX1797	CRT RUBBER	1	
421(4)		VMZ1611	FBT BARRIER	1	
550(5)		VQT3668	OPERATING INSTRUCTIONS	1	<!>
			(FRENCH)		
551(5)		VPG5386	PACKING	1	
552(5)		VPN2523	CUSHION (UPPER)	1	
553(5)		VPN2524	CUSHION (LOWER)	1	
554(5)		VPN2618	ACCESSORIES BOX	1	
555(5)		VPN2629	PAD(A)	1	
556(5)		VFA0095	AV OUTPUT CORD	1	
557(5)		VFC0729	SHOULDER STRAP	1	
560(5)		VJA0401	DC OUTPUT CORD	1	
			JIG & TOOLS		
		VFM8180H8PF	VHS-C ALIGNMENT TAPE	1	
		VFK0304	Y/C SEPARATOR	1	
		VFK0382	CAMERA HPLDER	1	
		VFK0431	CAMERA HOLDER ARM	1	
		VFK0432	HOLDER SPACER	1	
		XSN26+18	SCREW	2	
		VFK0546	HUNTING & GRAY/WHITE CHART	1	
		VFK0374	COLOUR TEMP. CONV. FILTER	1	(C12)
		VFK0375	COLOUR TEMP. CONV. FILTER	1	(C 2)
		VFK0547	COLOUR TEMP. CONV. FILTER	1	(C 8)
		VMX1304	CLEARANCE SPACER	1	
		VMS3504	ALIGNMENT SHAFT	1	
		VKW1049	DIFFUSION PLATE	1	
		VFKS0051	EXTENSION CABLE (3P)	1	
		VFKS0052	EXTENSION CABLE (5P)	1	
		VFK0430	EXTENSION CABLE (14P)	1	
		VFK0503	EXTENSION CABLE (5P)	1	
		VFK0380	EXTENSION CABLE (18P)	1	
		VFK0497	EXTENSION CABLE (6P)	1	
		VFK0607	EXTENSION CABLE (26P)	1	
		VFKS0067	EXTENSION CABLE (20P)	1	
		VFKS0060	EXTENSION CABLE (2P)	1	
		VFK0499	EXTENSION CABLE (3P)	1	
		VFKS0074	CONNECTOR	1	
		VFK0335	RETAINING RING REMOVER	1	
		VFK0329	POST ADJUSTMENT SCREWDRIVER	1	
		VFK0343	CHECK LIGHT	1	
		VFK0326	HEX WRENCH SET	1	
		VFK27	HEAD CLEANING STICK	1	
		MOR265	MORLYTONE GREASE	1	

4-3. ELECTRICAL REPLACEMENT PARTS LIST

Note:1.* Be sure to make your orders of replacement parts according to this list.
2.IMPORTANT SAFETY NOTICE
Components identified with the mark <!> have the special characteristics for safety. When replacing any of these components,use only the same type.
3.Unless otherwise specified,
All resistors are in OHMS ,K=1,000 OHMS. All capacitors are in MICRO-FARADS(uf),P=uuF.
4.The P.C.Board units marked width'■'show below the main assembled parts.
5.Printed circuit board assembly with mark(NIA) is no longer available after discontinuation of the product.

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
		VEP22083A	AWT C.B.A.	1	(NIA)
		VEP22082E	CCD DRIVE C.B.A.	1	(NIA)
		VEP23102A	PROCESS C.B.A.	1	(NIA)
		VEP27047A	AUTO FOCUS C.B.A.	1	(NIA)
		VEP26059A	SECAM ENCODER C.B.A.	1	(NIA)
		VEP06644A	CAMERA OPERATION C.B.A.	1	(NIA)
		VEP30038A	AF/ZOOM DETECT C.B.A.	1	(NIA)
		VEP28022B	E.V.F. C.B.A.	1	(NIA)
		VEP06643B	MAIN C.B.A.	1	(NIA)
		VEP03769A	LUMINANCE/CHROMINANCE C.B.A	1	(NIA)
		VEP02349A	DRIVE C.B.A.	1	(NIA)
		VEP05147A	HEAD AMP C.B.A.	1	(NIA)
		VEP06592B	VTR OPERATION C.B.A.	1	(NIA)
		VEK4413	START/STOP SW C.B.A.	1	(NIA)
		VEK3971	ZOOM SW C.B.A.	1	(NIA)
		VEK4733	EARPHONE JACK C.B.A.	1	(NIA)
	■	VEP22083A	AWT C.B.A.		(NIA)
			CAPACITORS		
C601-03		ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	3	
FP601		VJS2110	CONNECTOR (FEMALE)	1	
IC601		M51096AU	IC	1	
IC602		AN1358S	IC	1	
			RESISTORS		
R601		ERJ6GMYF123	M.RESISTOR CH1/10W 12K	1	
R602		ERJ6GMYF822	M.RESISTOR CH1/10W 8.2K	1	
R603		ERJ6GMYF124	M.RESISTOR CH1/10W 120K	1	
R604		ERJ3GEYJ222	M.RESISTOR CH 3W 2.2K	1	
R605		ERJ3GEYJ102	M.RESISTOR CH 3W 1K	1	
R606,07		ERJ3GEYJ103	M.RESISTOR CH 3W 10K	2	
R608		ERJ3GEYJ102	M.RESISTOR CH 3W 1K	1	
R609		ERJ3GEYJ222	M.RESISTOR CH 3W 2.2K	1	
R610		ERJ3GEYJ103	M.RESISTOR CH 3W 10K	1	
	■	VEP22082E	CCD DRIVE C.B.A.		(NIA)
B201		VJP1948	CONNECTOR (MALE)	1	
			CAPACITORS		
C201		ECSF1AE106	T.CAPACITOR 10V 10U	1	
C202,03		ECUM1H150JCV	C.CAPACITOR CH 50V 15P	2	
C204		ECUM1H390JCV	C.CAPACITOR CH 50V 39P	1	
C206		ECRJA010A12	TRIMER	1	
C207		ECSF1AE106	T.CAPACITOR 10V 10U	1	
C208		ECEV0JA220	E.CAPACITOR 6.3V 22U	1	
C209		ECSF1CE106	T.CAPACITOR 16V 10U	1	
C210		ECEV1HA010	E.CAPACITOR 50V 1U	1	
C211		ECUM1E104ZFM	C.CAPACITOR CH 25V 0.1U	1	
C212		ECEA1EKS100I	E.CAPACITOR 25V 10U	1	
C213		ECUM1E473ZFN	C.CAPACITOR CH 25V 0.047U	1	
C214		ECEA1HKS010	E.CAPACITOR 50V 1U	1	
C215,16		ECUM1H270JCV	C.CAPACITOR CH 50V 27P	2	
C218,19		ECUM1H270JCV	C.CAPACITOR CH 50V 27P	2	
C220		ECSF1CE106	T.CAPACITOR 16V 10U	1	
C221,22		ECUM1H270JCV	C.CAPACITOR CH 50V 27P	2	
C223		ECUM1H682ZFV	C.CAPACITOR CH 50V 6800P	1	
C225		ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	1	
C226		ECEA1EKS100I	E.CAPACITOR 25V 10U	1	
C229		ECEA0JKS470	E.CAPACITOR 6.3V 47U	1	
C230-33		ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	4	
C236		ECUM1H150JCV	C.CAPACITOR CH 50V 15P	1	
C237		ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	1	
C238-40		ECUM1H330JCV	C.CAPACITOR CH 50V 33P	3	
C241		ECUM1H101JCV	C.CAPACITOR CH 50V 100P	1	
C242,43		ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	2	
C244		ECUM1E473ZFN	C.CAPACITOR CH 25V 0.047U	1	
C245		ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	1	
C246		ECUM1H150JCV	C.CAPACITOR CH 50V 15P	1	
C247		ECEV1CA100	E.CAPACITOR 16V 10U	1	
C248-50		ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	3	
C251		ECUM1H330JCV	C.CAPACITOR CH 50V 33P	1	
C252,53		ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	2	
C255		ECEV1CA100	E.CAPACITOR 16V 10U	1	
C260,61		ECUM1H103ZFV	C.CAPACITOR CH 50V 0.01U	2	
C262,63		ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	2	
C280		ECSF1AE106	T.CAPACITOR 10V 10U	1	
C281		ECSF1CE106	T.CAPACITOR 16V 10U	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
C282,83		ECUM1H180JCV	C.CAPACITOR CH 50V 18P	2	
C284		ECUM1E473ZFN	C.CAPACITOR CH 25V 0.047U	1	
C285		ECUM1H180JCV	C.CAPACITOR CH 50V 18P	1	
D202		MA728	DIODE	1	
D204,05		MA110	DIODE	2	
D207		MA110	DIODE	1	
D209		MA141WK	DIODE	1	
D210-13		MA110	DIODE	4	
FL201		ELB5B010	FILTER	1	
FP201		VJS2143	CONNECTOR (FEMALE)	1	
IC201		MN73912XWB	IC	1	
IC202		UPD6147G	IC	1	
IC203		AN2012S	IC	1	
L201		ELJFA150KF	COIL	1	
L203-07		ELJFA150KF	COIL	5	
L210-14		VLQ0291	COIL	5	
Q201-03		2SD1819	TRANSISTOR	3	
Q204		2SC3930	TRANSISTOR	1	
Q205		2SA1610	TRANSISTOR	1	
Q206		2SC4176	TRANSISTOR	1	
Q207		2SA1610	TRANSISTOR	1	
Q208		2SC4176	TRANSISTOR	1	
Q209		2SA1610	TRANSISTOR	1	
Q210		2SC4176	TRANSISTOR	1	
			RESISTORS		
R201		ERJ3GEYJ331	M.RESISTOR CH 3W 330	1	
R202		ERJ3GEYJ151	M.RESISTOR CH 3W 150	1	
R203		ERJ3GEYJ105	M.RESISTOR CH 3W 1M	1	
R204		ERJ3GEYJ102	M.RESISTOR CH 3W 1K	1	
R205		ERJ3GEYJ333	M.RESISTOR CH 3W 33K	1	
R206		ERJ3GEYJ183	M.RESISTOR CH 3W 18K	1	
R207		ERJ3GEYJ103	M.RESISTOR CH 3W 10K	1	
R208		ERJ3GEYJ471	M.RESISTOR CH 3W 470	1	
R209		ERJ3GEYJ473	M.RESISTOR CH 3W 47K	1	
R210,11		ERJ3GEYJ472	M.RESISTOR CH 3W 4.7K	2	
R212		ERJ3GEYJ330	M.RESISTOR CH 3W 33	1	
R216		ERJ3GEYJ103	M.RESISTOR CH 3W 10K	1	
R217		ERJ3GEYJ101	M.RESISTOR CH 3W 100	1	
R218		ERJ3GEYJ472	M.RESISTOR CH 3W 4.7K	1	
R221		ERJ3GEYJ101	M.RESISTOR CH 3W 100	1	
R222		ERJ3GEYJ123	M.RESISTOR CH 3W 12K	1	
R223,24		ERJ3GEYJ221	M.RESISTOR CH 3W 220	2	
R225,26		ERJ3GEYJ102	M.RESISTOR CH 3W 1K	2	
R227		ERJ3GEYJ272	M.RESISTOR CH 3W 2.7K	1	
R228		ERJ3GEYJ221	M.RESISTOR CH 3W 220	1	
R229		ERJ3GEYJ102	M.RESISTOR CH 3W 1K	1	
R230		ERJ3GEYJ105	M.RESISTOR CH 3W 1M	1	
R231		ERJ3GEYJ104	M.RESISTOR CH 3W 100K	1	
R232,33		ERJ3GEYJ101	M.RESISTOR CH 3W 100	2	
R234		ERJ3GEYJ272	M.RESISTOR CH 3W 2.7K	1	
R235		ERJ3GEYJ104	M.RESISTOR CH 3W 100K	1	
R236		ERJ3GEYJ270	M.RESISTOR CH 3W 27	1	
R240		ERJ3GEYJ332	M.RESISTOR CH 3W 3.3K	1	
R270		ERJ8GCYJ330	M.RESISTOR CH 1/8W 33	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
VR201		EVM7JSX30B25	V.RESISTOR 200K	1	
VR202		EVM7JSX30B54	V.RESISTOR 50K	1	
X201		VSX0240	CRYSTAL OSCILLATOR	1	
	■	VEP23102A	PROCESS C.B.A.		(NLA)
B301		VJS1948	CONNECTOR	1	
B305		VJS2574	CONNECTOR (FEMALE)	1	
			CAPACITORS		
C301		ECUM1H151JCV	C.CAPACITOR CH 50V 150P	1	
C303,04		ECST1CY105Z	T.CAPACITOR 16V 1U	2	
C305		ECUM1H102KBV	C.CAPACITOR CH 50V 1000P	1	
C306		ECUM1H103ZFV	C.CAPACITOR CH 50V 0.01U	1	
C307		ECUM1C105ZFM	C.CAPACITOR CH 16V 1U	1	
C308		ECUM1H103ZFV	C.CAPACITOR CH 50V 0.01U	1	
C309		ECUM1H680JCV	C.CAPACITOR CH 50V 68P	1	
C310		ECUM1H220JCV	C.CAPACITOR CH 50V 22P	1	
C311		ECUM1C105ZFM	C.CAPACITOR CH 16V 1U	1	
C312		ECUM1H102KBV	C.CAPACITOR CH 50V 1000P	1	
C313		ECST1CY105Z	T.CAPACITOR 16V 1U	1	
C314		ECSF1CE106	T.CAPACITOR 16V 10U	1	
C316,17		ECUM1C105ZFM	C.CAPACITOR CH 16V 1U	2	
C318,19		ECUM1H103ZFV	C.CAPACITOR CH 50V 0.01U	2	
C320,21		ECUM1E473ZFN	C.CAPACITOR CH 25V 0.047U	2	
C322		ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	1	
C323		ECSF0JE226	T.CAPACITOR 6.3V 22U	1	
C324		ECUM1H103ZFV	C.CAPACITOR CH 50V 0.01U	1	
C325		ECEV1HA2R2	E.CAPACITOR 50V 2.2U	1	
C326		ECEA1CKK100	E.CAPACITOR 16V 10U	1	
C327		ECUM1H103ZFV	C.CAPACITOR CH 50V 0.01U	1	
C328,29		ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	2	
C330		ECSF1AE226	T.CAPACITOR 10V 22U	1	
C331.		ECUM1E473ZFN	C.CAPACITOR CH 25V 0.047U	1	
C332		ECEV1HA010	E.CAPACITOR 50V 1U	1	
C333		ECEV1HA3R3	E.CAPACITOR 50V 3.3U	1	
C334		ECUM1H101JCV	C.CAPACITOR CH 50V 100P	1	
C335		ECUM1E473ZFN	C.CAPACITOR CH 25V 0.047U	1	
C336,37		ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	2	
C338,39		ECUM1E473ZFN	C.CAPACITOR CH 25V 0.047U	2	
C340,41		ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	2	
C342		ECUM1E473ZFN	C.CAPACITOR CH 25V 0.047U	1	
C343		ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	1	
C344		ECUM1H102KBV	C.CAPACITOR CH 50V 1000P	1	
C345		ECEV1CAN4R7R	E.CAPACITOR 16V 4.7U	1	
C348		ECEV1CA100	E.CAPACITOR 16V 10U	1	
C349		ECUM1H221JCV	C.CAPACITOR CH 50V 220P	1	
C350		ECEA1CKK100	E.CAPACITOR 16V 10U	1	
C351		ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	1	
C354		ECUM1C224ZFN	C.CAPACITOR CH 16V 0.22U	1	
C357		ECEA1HKK010	E.CAPACITOR 50V 1U	1	
C358		ECSF1AE226	T.CAPACITOR 10V 22U	1	
C360		ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	1	
C361		ECEA1CKS330	E.CAPACITOR 16V 33U	1	
C363,64		ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	2	
C365		ECSF0JE336	T.CAPACITOR 6.3V 33U	1	
C366		ECUM1H103ZFV	C.CAPACITOR CH 50V 0.01U	1	
C368		ECUM1H271JCV	C.CAPACITOR CH 50V 270P	1	
C369		ECSF1AE106	T.CAPACITOR 10V 10U	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
C371		ECST1CY105Z	T.CAPACITOR 16V 1U	1	
C372		ECEV0JA470	E.CAPACITOR 6.3V 47U	1	
C373		ECEA1CKS100	E.CAPACITOR 16V 10U	1	
C374-76		ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	3	
C377		ECUM1H103ZFV	C.CAPACITOR CH 50V 0.01U	1	
C378		ECUM1H220JCV	C.CAPACITOR CH 50V 22P	1	
C380		ECUM1H330JCV	C.CAPACITOR CH 50V 33P	1	
C382		ECUM1H220JCV	C.CAPACITOR CH 50V 22P	1	
C384		ECEA1EKS4R7I	E.CAPACITOR 25V 4.7U	1	
C385		ECEA1CKS100	E.CAPACITOR 16V 10U	1	
C386		ECEV1CA100	E.CAPACITOR 16V 10U	1	
C387-89		ECUM1H560JCV	C.CAPACITOR CH 50V 56P	3	
C393		ECUM1H820JCV	C.CAPACITOR CH 50V 82P	1	
C395,96		ECUM1C105ZFM	C.CAPACITOR CH 16V 1U	2	
C398		ECUM1H103ZFV	C.CAPACITOR CH 50V 0.01U	1	
C406		ECUM1H391KBV	C.CAPACITOR CH 50V 390P	1	
C416		ECEA0GKS221	E.CAPACITOR 4V 220U	1	
C417		ECUM1H390JCV	C.CAPACITOR CH 50V 39P	1	
C501		ECEV1AAN100	E.CAPACITOR 10V 10U	1	
C502,03		ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	2	
C504		ECEV1AAN100	E.CAPACITOR 10V 10U	1	
C505,06		ECUM1E473ZFN	C.CAPACITOR CH 25V 0.047U	2	
C507		ECEA1CKS100	E.CAPACITOR 16V 10U	1	
D301		MA141A	DIODE	1	
D305		MA141A	DIODE	1	
D306		MA141WK	DIODE	1	
D307		MA728	DIODE	1	
D308		MA3047M	DIODE	1	
D310		MA110	DIODE	1	
D501		MA141WA	DIODE	1	
D502		MA728	DIODE	1	
FL301		ELB4D009	FILTER	1	
FL302		VLF0664	FILTER	1	
FL303		ELB4B003	FILTER	1	
FL304		ELB4C011	FILTER	1	
FL305		VLF0798	FILTER	1	
FL308		ELB4B030	FILTER	1	
FL309		ELB4D009	FILTER	1	
FP302		VJS2596	CONNECTOR (FEMALE)	1	
FP306		VJS2137	CONNECTOR	1	
FP310		VJS2118	CONNECTOR	1	
IC302		MN3819S	IC	1	
IC303		MN3820S	IC	1	
IC304		AN2154FAP	IC	1	
IC308,09		LM2904M	IC	2	
IC310		AN2254FAP	IC	1	
IC311		MN67621F	IC	1	
IC312		MC8182A	IC	1	
IC501		RZ4052BM	IC	1	
IC502		LM2902M	IC	1	
IC503		LM2904M	IC	1	
IC504,05		LM2902M	IC	2	
L301		VLQ0163K150	COIL 15UH	1	
L302		VLQ0319F150	COIL 15UH	1	
L303		VLQ0163K101	COIL 100UH	1	
L304-06		VLQ0163K150	COIL 15UH	3	
L308,09		VLQ0163K150	COIL 15UH	2	
L310		VLQ0291	COIL	1	
L311		VLQ0163K150	COIL 15UH	1	
L312		VLQ0163K101	COIL 100UH	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
L313		VLQ0163K330	COIL 33UH	1	
L316		VLQ0163K330	COIL 33UH	1	
L317		VLQ0401K330	COIL 33UH	1	
P303		VJP1608T	CONNECTOR(MALE)	1	
P307		VJP1607T	CONNECTOR(MALE)	1	
P308		VJP2260	CONNECTOR (MALE)	1	
P309		VJP2261	CONNECTOR (MALE)	1	
P311		VJP1595R	CONNECTOR(MALE) 2P	1	
P312		VJP1595T	CONNECTOR(MALE) 2P	1	
Q301		2SD1819	TRANSISTOR	1	
Q302		2SC3931	TRANSISTOR	1	
Q303		2SB1218	TRANSISTOR	1	
Q304		2SA1532	TRANSISTOR	1	
Q305		XN4601	TRANSISTOR-RESISTOR	1	
Q306		XN4401	TRANSISTOR-RESISTOR	1	
Q308		XN4601	TRANSISTOR-RESISTOR	1	
Q310		2SB1218	TRANSISTOR	1	
Q312		2SD1819	TRANSISTOR	1	
Q313		2SC3931	TRANSISTOR	1	
Q314		2SD1819	TRANSISTOR	1	
Q315		XN4401	TRANSISTOR-RESISTOR	1	
Q317		2SD1819	TRANSISTOR	1	
Q322		XN4608	TRANSISTOR-RESISTOR	1	
Q324		2SA1532	TRANSISTOR	1	
Q329-32		2SD1819	TRANSISTOR	4	
Q501		2SB1218	TRANSISTOR	1	
Q502		XN4401	TRANSISTOR-RESISTOR	1	
Q503		XN4501	TRANSISTOR-RESISTOR	1	
Q504		XN4401	TRANSISTOR-RESISTOR	1	
Q505		XN4501	TRANSISTOR-RESISTOR	1	
Q506		2SD874	TRANSISTOR	1	
Q508-10		XN4601	TRANSISTOR-RESISTOR	3	
			RESISTORS		
R301		ERJ3GEYJ102	M.RESISTOR CH 3W 1K	1	
R302		ERJ3GEYJ271	M.RESISTOR CH 3W 270	1	
R303		ERJ3GEYJ391	M.RESISTOR CH 3W 390	1	
R304		ERJ3GEYJ102	M.RESISTOR CH 3W 1K	1	
R305		ERJ3GEYJ471	M.RESISTOR CH 3W 470	1	
R306		ERJ3GEYJ222	M.RESISTOR CH 3W 2.2K	1	
R307		ERJ3GEYJ102	M.RESISTOR CH 3W 1K	1	
R308		ERJ3GEYJ182	M.RESISTOR CH 3W 1.8K	1	
R309		ERJ3GEYJ561	M.RESISTOR CH 3W 560	1	
R310		ERJ3GEYJ101	M.RESISTOR CH 3W 100	1	
R311,12		ERJ3GEYJ332	M.RESISTOR CH 3W 3.3K	2	
R313		ERJ3GEYJ472	M.RESISTOR CH 3W 4.7K	1	
R314		ERJ3GEYJ102	M.RESISTOR CH 3W 1K	1	
R315		ERJ3GEYJ182	M.RESISTOR CH 3W 1.8K	1	
R317		ERJ3GEYJ561	M.RESISTOR CH 3W 560	1	
R318		ERJ3GEYJ392	M.RESISTOR CH 3W 3.9K	1	
R319		ERJ3GEYJ102	M.RESISTOR CH 3W 1K	1	
R321		ERJ3GEYJ222	M.RESISTOR CH 3W 2.2K	1	
R322		ERJ3GEYJ102	M.RESISTOR CH 3W 1K	1	
R323		ERJ3GEYJ472	M.RESISTOR CH 3W 4.7K	1	
R324		ERJ3GEYJ222	M.RESISTOR CH 3W 2.2K	1	
R325,26		ERJ3GEYJ472	M.RESISTOR CH 3W 4.7K	2	
R327		ERJ3GEYJ102	M.RESISTOR CH 3W 1K	1	
R328		ERJ3GEYJ472	M.RESISTOR CH 3W 4.7K	1	
R329		ERJ3GEYJ183	M.RESISTOR CH 3W 18K	1	
R330		ERJ3GEYJ332	M.RESISTOR CH 3W 3.3K	1	
R331		ERJ3GEYJ562	M.RESISTOR CH 3W 5.6K	1	
R332		ERJ3GEYJ472	M.RESISTOR CH 3W 4.7K	1	
R333		ERJ3GEYJ822	M.RESISTOR CH 3W 8.2K	1	
R334		ERJ3GEYJ821	M.RESISTOR CH 3W 820	1	
R336		ERJ3GEYJ104	M.RESISTOR CH 3W 100K	1	
R337		ERJ3GEYJ154	M.RESISTOR CH 3W 150K	1	
R338		ERJ3GEYJ102	M.RESISTOR CH 3W 1K	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
R339		ERJ3GEYJ393	M.RESISTOR CH 3W 39K	1	
R340		ERJ3GEYJ183	M.RESISTOR CH 3W 18K	1	
R341		ERJ3GEYJ153	M.RESISTOR CH 3W 15K	1	
R342		ERJ3GEYJ473	M.RESISTOR CH 3W 47K	1	
R343		ERJ3GEYJ273	M.RESISTOR CH 3W 27K	1	
R344		ERJ3GEYJ183	M.RESISTOR CH 3W 18K	1	
R345		ERJ3GEYJ333	M.RESISTOR CH 3W 33K	1	
R348		ERJ3GEYJ473	M.RESISTOR CH 3W 47K	1	
R349		ERJ3GEYJ103	M.RESISTOR CH 3W 10K	1	
R350		ERJ3GEYJ562	M.RESISTOR CH 3W 5.6K	1	
R351		ERJ3GEYJ560	M.RESISTOR CH 3W 56	1	
R352		ERJ3GEYJ104	M.RESISTOR CH 3W 100K	1	
R353		ERJ3GEYJ223	M.RESISTOR CH 3W 22K	1	
R354		ERJ3GEYJ273	M.RESISTOR CH 3W 27K	1	
R355		ERJ3GEYJ102	M.RESISTOR CH 3W 1K	1	
R357		ERJ3GEYJ273	M.RESISTOR CH 3W 27K	1	
R358		ERJ3GEYJ102	M.RESISTOR CH 3W 1K	1	
R359		ERJ3GEYJ104	M.RESISTOR CH 3W 100K	1	
R360		ERJ3GEYJ472	M.RESISTOR CH 3W 4.7K	1	
R361,62		ERJ3GEYJ333	M.RESISTOR CH 3W 33K	2	
R363		ERJ3GEYJ222	M.RESISTOR CH 3W 2.2K	1	
R364		ERJ3GEYJ472	M.RESISTOR CH 3W 4.7K	1	
R365		ERJ3GEYJ103	M.RESISTOR CH 3W 10K	1	
R366		ERJ3GEYJ102	M.RESISTOR CH 3W 1K	1	
R367		ERJ3GEYJ561	M.RESISTOR CH 3W 560	1	
R368		ERJ3GEYJ471	M.RESISTOR CH 3W 470	1	
R369-71		ERJ3GEYJ102	M.RESISTOR CH 3W 1K	3	
R374,75		ERJ3GEYJ472	M.RESISTOR CH 3W 4.7K	2	
R376		ERJ3GEYJ473	M.RESISTOR CH 3W 47K	1	
R377		ERJ3GEYJ102	M.RESISTOR CH 3W 1K	1	
R378		ERJ3GEYJ392	M.RESISTOR CH 3W 3.9K	1	
R380		ERJ3GEYJ222	M.RESISTOR CH 3W 2.2K	1	
R381		ERJ3GEYJ152	M.RESISTOR CH 3W 1.5K	1	
R382		ERJ3GEYJ273	M.RESISTOR CH 3W 27K	1	
R383		ERJ3GEYJ683	M.RESISTOR CH 3W 68K	1	
R385		ERJ3GEYJ823	M.RESISTOR CH 3W 82K	1	
R387		ERJ3GEYJ103	M.RESISTOR CH 3W 10K	1	
R388		ERJ3GEYJ182	M.RESISTOR CH 3W 1.8K	1	
R389		ERJ3GEYJ105	M.RESISTOR CH 3W 1M	1	
R390		ERJ3GEYJ123	M.RESISTOR CH 3W 12K	1	
R397		ERJ3GEYJ101	M.RESISTOR CH 3W 100	1	
R398		ERJ3GEYJ104	M.RESISTOR CH 3W 100K	1	
R399		ERJ3GEYJ563	M.RESISTOR CH 3W 56K	1	
R400		ERJ3GEYJ104	M.RESISTOR CH 3W 100K	1	
R401		ERJ3GEYJ103	M.RESISTOR CH 3W 10K	1	
R404		ERJ3GEYJ472	M.RESISTOR CH 3W 4.7K	1	
R405		ERJ3GEYJ822	M.RESISTOR CH 3W 8.2K	1	
R406		ERJ3GEYJ681	M.RESISTOR CH 3W 680	1	
R408		ERJ3GEYJ681	M.RESISTOR CH 3W 680	1	
R409		ERJ3GEYJ103	M.RESISTOR CH 3W 10K	1	
R410		ERJ3GEYJ392	M.RESISTOR CH 3W 3.9K	1	
R414		ERJ3GEYJ391	M.RESISTOR CH 3W 390	1	
R415		ERJ3GEYJ103	M.RESISTOR CH 3W 10K	1	
R417		ERJ3GEYJ102	M.RESISTOR CH 3W 1K	1	
R418		ERJ3GEYJ103	M.RESISTOR CH 3W 10K	1	
R419		ERJ3GEYJ152	M.RESISTOR CH 3W 1.5K	1	
R426		ERJ3GEYJ102	M.RESISTOR CH 3W 1K	1	
R427		ERJ3GEYJ472	M.RESISTOR CH 3W 4.7K	1	
R428		ERJ3GEY0R00	M.RESISTOR CH 3W 0.00	1	
R429		ERJ3GEYJ222	M.RESISTOR CH 3W 2.2K	1	
R431		ERJ3GEYJ223	M.RESISTOR CH 3W 22K	1	
R432		ERJ3GEYJ683	M.RESISTOR CH 3W 68K	1	
R433		ERJ3GEYJ563	M.RESISTOR CH 3W 56K	1	
R434		ERJ3GEYJ102	M.RESISTOR CH 3W 1K	1	
R435		ERJ3GEYJ103	M.RESISTOR CH 3W 10K	1	
R436		ERJ3GEYJ392	M.RESISTOR CH 3W 3.9K	1	
R437		ERJ3GEYJ102	M.RESISTOR CH 3W 1K	1	
R439		ERJ3GEYJ472	M.RESISTOR CH 3W 4.7K	1	
R440		ERJ3GEYJ103	M.RESISTOR CH 3W 10K	1	
R442		ERJ3GEYJ473	M.RESISTOR CH 3W 47K	1	
R444		ERJ3GEYJ472	M.RESISTOR CH 3W 4.7K	1	
R445		ERJ3GEYJ561	M.RESISTOR CH 3W 560	1	
R447		ERJ3GEYJ222	M.RESISTOR CH 3W 2.2K	1	
R448		ERJ3GEYJ332	M.RESISTOR CH 3W 3.3K	1	
R449		ERJ3GEYJ392	M.RESISTOR CH 3W 3.9K	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
R450		ERJ3GEYJ123	M.RESISTOR CH 3W 12K	1	
R451		ERJ3GEYJ823	M.RESISTOR CH 3W 82K	1	
R452		ERJ3GEYJ123	M.RESISTOR CH 3W 12K	1	
R462		ERJ3GEYJ102	M.RESISTOR CH 3W 1K	1	
R465		ERJ3GEYJ681	M.RESISTOR CH 3W 680	1	
R466,67		ERJ3GEYJ472	M.RESISTOR CH 3W 4.7K	2	
R468		ERJ3GEYJ562	M.RESISTOR CH 3W 5.6K	1	
R469		ERJ3GEYJ563	M.RESISTOR CH 3W 56K	1	
R470,71		ERJ3GEYJ153	M.RESISTOR CH 3W 15K	2	
R472,73		ERJ3GEYJ103	M.RESISTOR CH 3W 10K	2	
R474,75		ERJ3GEYJ153	M.RESISTOR CH 3W 15K	2	
R476-79		ERJ3GEYJ103	M.RESISTOR CH 3W 10K	4	
R480		ERJ3GEYJ562	M.RESISTOR CH 3W 5.6K	1	
R501,02		ERJ3GEYJ682	M.RESISTOR CH 3W 6.8K	2	
R503,04		ERJ3GEYJ104	M.RESISTOR CH 3W 100K	2	
R505		ERJ3GEYJ334	M.RESISTOR CH 3W 330K	1	
R506,07		ERJ3GEYJ103	M.RESISTOR CH 3W 10K	2	
R508		ERJ3GEYJ104	M.RESISTOR CH 3W 100K	1	
R509		ERJ3GEYJ224	M.RESISTOR CH 3W 220K	1	
R510		ERJ3GEYJ154	M.RESISTOR CH 3W 150K	1	
R511		ERJ3GEYJ224	M.RESISTOR CH 3W 220K	1	
R512,13		ERJ3GEYJ103	M.RESISTOR CH 3W 10K	2	
R514,15		ERJ3GEYJ104	M.RESISTOR CH 3W 100K	2	
R516		ERJ3GEYJ334	M.RESISTOR CH 3W 330K	1	
R517		ERJ3GEYJ102	M.RESISTOR CH 3W 1K	1	
R518		ERJ3GEYJ106	M.RESISTOR CH 3W 10M	1	
R519		ERJ3GEYJ563	M.RESISTOR CH 3W 56K	1	
R520		ERJ3GEYJ274	M.RESISTOR CH 3W 270K	1	
R521		ERJ3GEYJ334	M.RESISTOR CH 3W 330K	1	
R522		ERJ3GEYJ335	M.RESISTOR CH 3W 3.3M	1	
R523		ERJ3GEYJ563	M.RESISTOR CH 3W 56K	1	
R524		ERJ3GEYJ564	M.RESISTOR CH 3W 560K	1	
R525		ERJ3GEYJ102	M.RESISTOR CH 3W 1K	1	
R526		ERJ3GEYJ106	M.RESISTOR CH 3W 10M	1	
R527		ERJ3GEYJ563	M.RESISTOR CH 3W 56K	1	
R528		ERJ3GEYJ274	M.RESISTOR CH 3W 270K	1	
R529		ERJ3GEYJ334	M.RESISTOR CH 3W 330K	1	
R530		ERJ3GEYJ335	M.RESISTOR CH 3W 3.3M	1	
R531		ERJ3GEYJ563	M.RESISTOR CH 3W 56K	1	
R532		ERJ3GEYJ564	M.RESISTOR CH 3W 560K	1	
R533		ERJ3GEYJ104	M.RESISTOR CH 3W 100K	1	
R534-36		ERJ3GEYJ103	M.RESISTOR CH 3W 10K	3	
R537		ERJ3GEYJ224	M.RESISTOR CH 3W 220K	1	
R538		ERJ3GEYJ154	M.RESISTOR CH 3W 150K	1	
R539		ERJ3GEYJ823	M.RESISTOR CH 3W 82K	1	
R540,41		ERJ3GEYJ103	M.RESISTOR CH 3W 10K	2	
R542		ERJ3GEYJ224	M.RESISTOR CH 3W 220K	1	
R543		ERJ3GEYJ103	M.RESISTOR CH 3W 10K	1	
R544-53		ERJ3GEYJ333	M.RESISTOR CH 3W 33K	10	
R554-56		ERJ3GEYJ103	M.RESISTOR CH 3W 10K	3	
R557		ERJ3GEYJ104	M.RESISTOR CH 3W 100K	1	
R558		ERJ3GEYJ102	M.RESISTOR CH 3W 1K	1	
R559		ERJ3GEYJ104	M.RESISTOR CH 3W 100K	1	
R560		ERJ3GEYJ562	M.RESISTOR CH 3W 5.6K	1	
R561,62		ERJ3GEYJ102	M.RESISTOR CH 3W 1K	2	
R563,64		ERJ3GEYJ562	M.RESISTOR CH 3W 5.6K	2	
R565		ERJ3GEYJ182	M.RESISTOR CH 3W 1.8K	1	
R569-71		ERJ3GEYJ103	M.RESISTOR CH 3W 10K	3	
R572		ERJ3GEYJ102	M.RESISTOR CH 3W 1K	1	
R574,75		ERJ3GEYJ104	M.RESISTOR CH 3W 100K	2	
R576		ERJ3GEYJ222	M.RESISTOR CH 3W 2.2K	1	
R577-79		ERJ3GEYJ102	M.RESISTOR CH 3W 1K	3	
R580		ERJ3GEYJ104	M.RESISTOR CH 3W 100K	1	
R581		ERJ3GEYJ562	M.RESISTOR CH 3W 5.6K	1	
R582		ERJ3GEYJ104	M.RESISTOR CH 3W 100K	1	
R583		ERJ3GEYJ102	M.RESISTOR CH 3W 1K	1	
R584		ERJ3GEY0R00	M.RESISTOR CH 3W 0.00	1	
R585		ERJ3GEYJ103	M.RESISTOR CH 3W 10K	1	
TH301		VRT0019	THERMISTOR	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
VR301		EVM7JSX30B14	V.RESISTOR 10K	1	
VR303		EVM7JSX30B24	V.RESISTOR 20K	1	
VR304		EVM7JSX30B54	V.RESISTOR 50K	1	
VR305-07		EVM7JSX30B24	V.RESISTOR 20K	3	
VR311,12		EVM7JSX30B14	V.RESISTOR 10K	2	
VR313-15		EVM7JSX30B13	V.RESISTOR 1K	3	
VR317-20		EVM7JSX30B53	V.RESISTOR 5K	4	
VR324		EVM7JSX30B14	V.RESISTOR 10K	1	
VR327		EVM7JSX30B14	V.RESISTOR 10K	1	
VR328		EVM7JSX30B24	V.RESISTOR 20K	1	
VR330		EVM7JSX30B24	V.RESISTOR 20K	1	
VR523		EVM7JSX30B54	V.RESISTOR 50K	1	
VR525,26		EVM7JSX30B24	V.RESISTOR 20K	2	
VR527		EVM7JSX30B54	V.RESISTOR 50K	1	
VR528,29		EVM7JSX30B14	V.RESISTOR 10K	2	
VR530,31		EVM7JSX30B54	V.RESISTOR 50K	2	
			MISCELLANEOUS		
		VWJ0437	SECAM ENCODER FLEXIBLE CORD	1	
	■	VEP27047A	AUTO FOCUS C.B.A.		(NLA)
B701		VJP2574	CONNECTOR (MALE)	1	
			CAPACITORS		
C701		ECEA0JU471	E.CAPACITOR 6.3V 470U	1	
C702		ECUM1H270JCV	C.CAPACITOR CH 50V 27P	1	
C703		ECRJA020E12	TRIMER	1	
C706		ECUM1H101JCV	C.CAPACITOR CH 50V 100P	1	
C710,11		ECUM1E473KBM	C.CAPACITOR CH 25V 0.047U	2	
C712		ECEA0JKS101	E.CAPACITOR 6.3V 100U	1	
C713		ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	1	
C714		ECEA0JKS101	E.CAPACITOR 6.3V 100U	1	
C715		ECSF1AE106	T.CAPACITOR 10V 10U	1	
C716-19		ECEA1CKS100	E.CAPACITOR 16V 10U	4	
C720		ECEA0JSN220	E.CAPACITOR 6.3V 22U	1	
C721		ECUM1E473ZFN	C.CAPACITOR CH 25V 0.047U	1	
C722-24		ECUM1E273KBN	C.CAPACITOR CH 25V 0.027U	3	
C725		ECUM1E683ZFN	C.CAPACITOR CH 25V 0.063U	1	
C726		ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	1	
C727-29		ECUM1C224ZFN	C.CAPACITOR CH 16V 0.22U	3	
C730		ECUM1H330JCV	C.CAPACITOR CH 50V 33P	1	
C731		ECUM1E473ZFN	C.CAPACITOR CH 25V 0.047U	1	
C732-35		ECUM1H103ZFV	C.CAPACITOR CH 50V 0.01U	4	
C736		ECUM1H221KBV	C.CAPACITOR CH 50V 220P	1	
C737		ECRJA020E12	TRIMER	1	
C738,39		ECUM1C224ZFN	C.CAPACITOR CH 16V 0.22U	2	
C740,41		ECEA1CKS100	E.CAPACITOR 16V 10U	2	
C742		ECEA1HSN010	E.CAPACITOR 50V 1U	1	
C743		ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	1	
C744,45		ECEA0JKS470	E.CAPACITOR 6.3V 47U	2	
C746		ECUM1H103ZFV	C.CAPACITOR CH 50V 0.01U	1	
C747		ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	1	
C748		ECEA1CU100	E.CAPACITOR 16V 10U	1	
C749,50		ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	2	
C755		ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	1	
D701,02		MA141A	DIODE	2	
D703,04		1SS250	DIODE	2	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
FL701		ELB4B004	FILTER	1	
FL702		VLF0595	FILTER	1	
FL703		ELB4B005	FILTER	1	
FL704		ELB4D001	FILTER	1	
FL705		VLF0596	FILTER	1	
IC701		MN15867VNY	IC	1	
IC702		AN2584NFAP	IC	1	
IC703		RC4558M	IC	1	
IC704		AN78N05	IC	1	
IC705		NJM3415M	IC	1	
IC706		AN6663SP	IC	1	
L701		VLQ0300J560	COIL 56UH	1	
L702		VLQEL05F101K	COIL 100UH	1	
L703		VLQEL05F330K	COIL 33UH	1	
L704		VLQEL05F150K	COIL 15UH	1	
P701		VJP1599T	CONNECTOR(MALE) 6P	1	
P703		VJP1599T	CONNECTOR(MALE) 6P	1	
P704		VJP1596T	CONNECTOR(MALE) 3P	1	
P705		VJP1603T	CONNECTOR(MALE) 10P	1	
Q701,02		UN2211	TRANSISTOR-RESISTOR	2	
Q703		2SB710	TRANSISTOR CHIP	1	
Q704		2SA1255	TRANSISTOR	1	
Q705		2SC3138	TRANSISTOR	1	
Q706,07		2SD1819	TRANSISTOR	2	
Q710		XN1212	TRANSISTOR	1	
Q711		XN4501	TRANSISTOR-RESISTOR	1	
			RESISTORS		
R701		ERJ3GEYJ220	M.RESISTOR CH 3W 22	1	
R702,03		ERJ3GEYJ563	M.RESISTOR CH 3W 56K	2	
R704-06		ERJ3GEYJ103	M.RESISTOR CH 3W 10K	3	
R707,08		ERJ3GEYJ563	M.RESISTOR CH 3W 56K	2	
R709		ERJ3GEYJ102	M.RESISTOR CH 3W 1K	1	
R710-13		ERJ3GEYJ104	M.RESISTOR CH 3W 100K	4	
R715,16		ERJ3GEYJ104	M.RESISTOR CH 3W 100K	2	
R717		ERJ3GEYJ123	M.RESISTOR CH 3W 12K	1	
R718		ERJ3GEYJ154	M.RESISTOR CH 3W 150K	1	
R720		ERJ3GEYJ102	M.RESISTOR CH 3W 1K	1	
R721		ERJ3GEYJ123	M.RESISTOR CH 3W 12K	1	
R722		ERJ3GEYJ102	M.RESISTOR CH 3W 1K	1	
R723		ERJ3GEYJ123	M.RESISTOR CH 3W 12K	1	
R724,25		ERJ3GEYJ223	M.RESISTOR CH 3W 22K	2	
R726		ERJ3GEYJ124	M.RESISTOR CH 3W 120K	1	
R727		ERJ3GEYJ183	M.RESISTOR CH 3W 18K	1	
R728		ERJ3GEYJ823	M.RESISTOR CH 3W 82K	1	
R729		ERJ3GEYJ394	M.RESISTOR CH 3W 390K	1	
R730		ERJ3GEYJ474	M.RESISTOR CH 3W 470K	1	
R731		ERJ3GEYJ103	M.RESISTOR CH 3W 10K	1	
R732		ERJ3GEYG822	M.RESISTOR CH 3W 8.2K	1	
R733		ERJ3GEYG472	M.RESISTOR CH 3W 4.7K	1	
R734-38		ERJ3GEYJ102	M.RESISTOR CH 3W 1K	5	
R739		ERJ3GEYJ823	M.RESISTOR CH 3W 82K	1	
R740		ERJ3GEYJ332	M.RESISTOR CH 3W 3.3K	1	
R741		ERJ3GEYJ103	M.RESISTOR CH 3W 10K	1	
R742		ERJ3GEYJ102	M.RESISTOR CH 3W 1K	1	
R743		ERJ3GEYJ472	M.RESISTOR CH 3W 4.7K	1	
R744		ERJ3GEYJ103	M.RESISTOR CH 3W 10K	1	
R745		ERJ3GEYJ100	M.RESISTOR CH 3W 10	1	
R746		ERJ3GEYJ273	M.RESISTOR CH 3W 27K	1	
R747		ERJ3GEYJ104	M.RESISTOR CH 3W 100K	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
R748,49		ERJ3GEYJ274	M.RESISTOR CH 3W 270K	2	
R750		ERJ3GEYJ102	M.RESISTOR CH 3W 1K	1	
R751		ERJ3GEYJ224	M.RESISTOR CH 3W 220K	1	
R752		ERJ3GEYJ273	M.RESISTOR CH 3W 27K	1	
R759		ERJ3GEYJ222	M.RESISTOR CH 3W 2.2K	1	
R760		ERJ6GMYJ470	M.RESISTOR CH1/10W 47	1	
R761		ERJ3GEYJ103	M.RESISTOR CH 3W 10K	1	
T701		ETE13K43AY	TRANSFORMAR	1	
VR701		EVML1GA00B53	V.RESISTOR 5K	1	
VR702		EVML1GA00B15	V.RESISTOR 100K	1	
VR703		EVM7JSX30B14	V.RESISTOR 10K	1	
X701		VSX0299	CRYSTAL OSCILLATOR	1	
			MISCELLANEOUS		
		VSC2318	AF SHIELD	1	
		VSC2719	SHIELD	1	(FOR T701)
	■	VEP26059A	SECAM ENCODER C.B.A.		(NIA)
			CAPACITORS		
C631		ECSF1AE106	T.CAPACITOR 10V 10U	1	
C632		ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	1	
C633		ECUM1H681KBV	C.CAPACITOR CH 50V 680P	1	
C634		ECUM1H101JCV	C.CAPACITOR CH 50V 100P	1	
C635		ECUM1H122KBV	C.CAPACITOR CH 50V 1200P	1	
C636		ECEA0JKK100	E.CAPACITOR 6.3V 10U	1	
C637-39		ECUM1H103ZFV	C.CAPACITOR CH 50V 0.01U	3	
C640		ECUM1E473ZFN	C.CAPACITOR CH 25V 0.047U	1	
C641		ECEA0JKS220	E.CAPACITOR 6.3V 22U	1	
C642		ECEA0JKS330	E.CAPACITOR 6.3V 33U	1	
C643		ECEA0JKS101	E.CAPACITOR 6.3V 100U	1	
C644		ECUM1H103ZFV	C.CAPACITOR CH 50V 0.01U	1	
C645		ECUM1H562KBV	C.CAPACITOR CH 50V 5600P	1	
C646		ECUM1H560JCV	C.CAPACITOR CH 50V 56P	1	
C647		ECUM1H101JCV	C.CAPACITOR CH 50V 100P	1	
C648		ECUM1H080DCV	C.CAPACITOR CH 50V 8P	1	
C649		ECUM1H680JCV	C.CAPACITOR CH 50V 68P	1	
C650,51		ECEA0JKK100	E.CAPACITOR 6.3V 10U	2	
C652		ECEA0JKS220	E.CAPACITOR 6.3V 22U	1	
C653		ECUM1H120JCV	C.CAPACITOR CH 50V 12P	1	
C655		ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	1	
C656		ECUM1H680JCV	C.CAPACITOR CH 50V 68P	1	
C657		ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	1	
C658		ECEA1CKS100	E.CAPACITOR 16V 10U	1	
C659		ECEA0JKS330	E.CAPACITOR 6.3V 33U	1	
C660-62		ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	3	
C663		ECEA0JKK100	E.CAPACITOR 6.3V 10U	1	
C664		ECUM1H101JCV	C.CAPACITOR CH 50V 100P	1	
D631		MA141K	DIODE	1	
D632		MA141WA	DIODE	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
FL631		ELB4A004	FILTER	1	
FL632		ELB4B002	FILTER	1	
FP631		VJS2136	CONNECTOR (FEMALE)	1	
IC631		AN2441S	IC	1	
IC632		AN2445S	IC	1	
IC633		AN1324NS	IC	1	
L631		VLQ0163K150	COIL 15UH	1	
L632		VLQ0163K270	COIL 270UH	1	
L633		EIK5QA001Q	COIL	1	
L634		VLQ0163K100	COIL 10UH	1	
L635		VLQ0163K150	COIL 15UH	1	
P631		VJP1608T	CONNECTOR(MALE)	1	
Q631		2SD1819	TRANSISTOR	1	
Q632-34		2SC3931	TRANSISTOR	3	
Q635,36		2SD1819	TRANSISTOR	2	
Q637		2SB1218	TRANSISTOR	1	
Q638-45		2SD1819	TRANSISTOR	8	
Q646		2SB1218	TRANSISTOR	1	
Q647		XN4601	TRANSISTOR-RESISTOR	1	
			RESISTORS		
R631		ERJ3GEYJ103	M.RESISTOR CH 3W 10K	1	
R632		ERJ3GEYJ302	M.RESISTOR CH 3W 3K	1	
R633		ERJ3GEYJ121	M.RESISTOR CH 3W 120	1	
R634,35		ERJ3GEYJ102	M.RESISTOR CH 3W 1K	2	
R636		ERJ3GEYJ332	M.RESISTOR CH 3W 3.3K	1	
R637		ERJ3GEYJ102	M.RESISTOR CH 3W 1K	1	
R638,39		ERJ3GEYJ103	M.RESISTOR CH 3W 10K	2	
R640		ERJ3GEYJ471	M.RESISTOR CH 3W 470	1	
R641		ERJ3GEYJ101	M.RESISTOR CH 3W 100	1	
R642		ERJ3GEYJ242	M.RESISTOR CH 3W 2.4K	1	
R643		ERJ3GEYJ222	M.RESISTOR CH 3W 2.2K	1	
R644		ERJ3GEYJ102	M.RESISTOR CH 3W 1K	1	
R645		ERJ3GEYJ561	M.RESISTOR CH 3W 560	1	
R647		ERJ3GEYJ102	M.RESISTOR CH 3W 1K	1	
R648		ERJ3GEYJ273	M.RESISTOR CH 3W 27K	1	
R649		ERJ3GEYJ103	M.RESISTOR CH 3W 10K	1	
R650		ERJ3GEYJ472	M.RESISTOR CH 3W 4.7K	1	
R651		ERJ3GEYJ103	M.RESISTOR CH 3W 10K	1	
R652		ERJ3GEYJ222	M.RESISTOR CH 3W 2.2K	1	
R653		ERJ3GEYJ103	M.RESISTOR CH 3W 10K	1	
R654		ERJ3GEYJ683	M.RESISTOR CH 3W 68K	1	
R655		ERJ3GEYJ103	M.RESISTOR CH 3W 10K	1	
R656		ERJ3GEYJ332	M.RESISTOR CH 3W 3.3K	1	
R657		ERJ3GEYJ103	M.RESISTOR CH 3W 10K	1	
R658		ERJ3GEYJ332	M.RESISTOR CH 3W 3.3K	1	
R659		ERJ3GEYJ822	M.RESISTOR CH 3W 8.2K	1	
R660		ERJ3GEYJ562	M.RESISTOR CH 3W 5.6K	1	
R661		ERJ3GEYJ472	M.RESISTOR CH 3W 4.7K	1	
R664		ERJ3GEYJ563	M.RESISTOR CH 3W 56K	1	
R665		ERJ3GEYJ273	M.RESISTOR CH 3W 27K	1	
R666		ERJ3GEYJ562	M.RESISTOR CH 3W 5.6K	1	
R667-70		ERJ3GEYJ103	M.RESISTOR CH 3W 10K	4	
R671,72		ERJ3GEYJ682	M.RESISTOR CH 3W 6.8K	2	
R673		ERJ3GEYJ272	M.RESISTOR CH 3W 2.7K	1	
R674		ERJ3GEYJ682	M.RESISTOR CH 3W 6.8K	1	
R675,76		ERJ3GEYJ102	M.RESISTOR CH 3W 1K	2	
R677		ERJ3GEYJ562	M.RESISTOR CH 3W 5.6K	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
R678		ERJ3GEYJ333	M.RESISTOR CH 3W 33K	1	
R679		ERJ3GEYJ473	M.RESISTOR CH 3W 47K	1	
R680		ERJ3GEYJ563	M.RESISTOR CH 3W 56K	1	
R681		ERJ3GEYJ683	M.RESISTOR CH 3W 68K	1	
R682		ERJ3GEYJ152	M.RESISTOR CH 3W 1.5K	1	
R683		ERJ3GEYJ103	M.RESISTOR CH 3W 10K	1	
R684		ERJ3GEYJ332	M.RESISTOR CH 3W 3.3K	1	
R685		ERJ3GEYJ472	M.RESISTOR CH 3W 4.7K	1	
R686		ERJ3GEYJ272	M.RESISTOR CH 3W 2.7K	1	
VR631		EVM7JSX30B53	V.RESISTOR 5K	1	
VR632		EVM7JSX30B13	V.RESISTOR 1K	1	
VR633-35		EVM7JSX30B53	V.RESISTOR 5K	3	
VR636		EVM7JSX30B52	V.RESISTOR 500	1	
	■	VEP06644A	CAMERA OPERATION C.B.A.		(NLA)
			CAPACITORS		
C6801,02		ECEA0JKS470	E.CAPACITOR 6.3V 47U	2	
D6801,02		MA165	DIODE	2	
FP6801		VJS2282	CONNECTOR	1	
P6801		VJP1611T	CONNECTOR(MALE)	1	
P6802		VJP1607T	CONNECTOR(MALE)	1	
Q6801		2SD636	TRANSISTOR	1	(Q,R,S)
Q6802		2SB641	TRANSISTOR	1	(Q,R,S)
Q6803		2SD636	TRANSISTOR	1	(Q,R,S)
			RESISTORS		
R6803		ERDS2TJ183	C.RESISTOR 1/4W 18K	1	
R6804		ERDS2TJ124	C.RESISTOR 1/4W 120K	1	
R6805		ERDS2TJ154	C.RESISTOR 1/4W 150K	1	
R6808		ERDS2TJ822	C.RESISTOR 1/4W 8.2K	1	
R6831		ERDS2TJ102	C.RESISTOR 1/4W 1K	1	
R6832		ERDS2TJ394	C.RESISTOR 1/4W 390K	1	
R6833		ERDS2TJ153	C.RESISTOR 1/4W 15K	1	
R6834		ERDS2TJ333	C.RESISTOR 1/4W 33K	1	
R6835		ERDS2TJ223	C.RESISTOR 1/4W 22K	1	
R6836		ERDS2TJ153	C.RESISTOR 1/4W 15K	1	
R6837		ERDS2TJ393	C.RESISTOR 1/4W 39K	1	
SW6802-04		EVQQSU04W	SWITCH	3	
SW6806		VSS0220	SWITCH	1	
SW6807		VSS0236	SWITCH	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
	■	VEP30038A	AF ZOOM DETECT C.B.A.		(NLA)
			RESISTORS		
		ERDS2TJ391	C.RESISTOR 1/4W 390	1	
		ON2170	IC	1	
		VJP1610T	CONNECTOR (MALE)	1	
	■	VEP28022B	E.V.F. C.B.A.		(NLA)
			CAPACITORS		
C801		ECUM1E104JBM	C.CAPACITOR CH 25V 0.1U	1	
C802		ECEA1CKE101	E.CAPACITOR 16V 100U	1	
C803		ECUM1H121JCV	C.CAPACITOR CH 50V 120P	1	
C804		ECUM1C224ZFN	C.CAPACITOR CH 16V 0.22U	1	
C805		ECEA1CKE101	E.CAPACITOR 16V 100U	1	
C806		ECUM1E223KBN	C.CAPACITOR CH 25V 0.023U	1	
C807		ECEA1HKS010	E.CAPACITOR 50V 1U	1	
C808		ECUM1C105ZFN	C.CAPACITOR CH 16V 1U	1	
C809		ECEA1AF470	E.CAPACITOR 10V 47U	1	
C810		ECQP1302JZ	P.CAPACITOR	1	
C811		ECEA1CKE101	E.CAPACITOR 16V 100U	1	
C812		ECUM1H101JCV	C.CAPACITOR CH 50V 100P	1	
C813		VCK0088K151	C.CAPACITOR	1	
C814		ECEA1HKS010	E.CAPACITOR 50V 1U	1	
C815		VCK0058K331	C.CAPACITOR 330P	1	
C816		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
D801		MA141K	DIODE	1	
D802		SFPL-52	DIODE	1	
D803		ERA34-10	DIODE	1	
D861		BR1102W	DIODE	1	
IC801		AN2514S	IC	1	
L801		VLQ0319K390	COIL H	1	
L802		ELH5L201D	COIL H	1	
P801		VJP1599T	CONNECTOR (MALE)	1	
P802		VJP1597T	CONNECTOR (MALE)	1	
P803		VJP1229T	CONNECTOR (MALE)	1	
P804		VJP1596T	CONNECTOR	1	
Q801		2SB1218	TRANSISTOR	1	
Q802		2SD968A	TRANSISTOR	1	
Q803		2SA1532	TRANSISTOR	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
			RESISTORS		
R801		ERJ6ENF4422	M.RESISTOR	1	
R802		ERJ6GEYK3R9	M.RESISTOR CH 1/10W 3.9	1	
R805		ERJ3GEYJ102	M.RESISTOR CH 3W 1K	1	
R807		ERJ3GEYK4R7	M.RESISTOR CH 3W 4.7	1	
R808		ERJ3GEYJ272	M.RESISTOR CH 3W 2.7K	1	
R809		ERJ3GEYJ474	M.RESISTOR CH 3W 470K	1	
R810		ERJ3GEYJ104	M.RESISTOR CH 3W 100K	1	
R811,12		ERJ3GEYJ102	M.RESISTOR CH 3W 1K	2	
R813		ERJ3GEYJ391	M.RESISTOR CH 3W 390	1	
R814		ERJ3GEYJ222	M.RESISTOR CH 3W 2.2K	1	
R815		ERJ3GEYJ152	M.RESISTOR CH 3W 1.5K	1	
R816		ERJ3GEYJ472	M.RESISTOR CH 3W 4.7K	1	
R817		ERJ3GEYJ242	M.RESISTOR CH 3W 2.4K	1	
R818		ERJ3GEYJ153	M.RESISTOR CH 3W 15K	1	
R819-21		ERJ6GEYJ335	M.RESISTOR CH 1/10W 3.3M	3	
R825		VSF0015A025	IC PROTECTOR	1	
R861		ERJ3GEYJ271	M.RESISTOR CH 3W 270	1	
T801		ETF09L2A	TRANSFORMER	1	
VR801		EVM7JSX30BE2	V.RESISTOR	1	
VR802		EVM7JSX30B54	V.RESISTOR 50K	1	
VR803		EVMLPNA00BV6	V.RESISTOR	1	
VR804		EVMLPNA00BE6	V.RESISTOR	1	
	■	VEP06643B	MAIN C.B.A.		(NLA)
			CAPACITORS		
C1001		ECUM1H151JCN	C.CAPACITOR CH 50V 150P	1	
C1002		ECUM1H471KBV	C.CAPACITOR CH 50V 470P	1	
C1003		ECUM1H151JV	C.CAPACITOR CH 50V 150P	1	
C1004		ECEA1HKK010	E.CAPACITOR 50V 1U	1	
C1005		ECUM1C474ZFM	C.CAPACITOR CH 16V 0.47U	1	
C1006		ECUM1H472KBV	C.CAPACITOR CH 50V 4700P	1	
C1008		ECUM1C104ZFV	C.CAPACITOR CH 16V 0.1U	1	
C1011		ECEA1CU331	E.CAPACITOR 16V 330U	1	
C1015		ECEA05KJ471	E.CAPACITOR 470U	1	
C1016		ECEA05KJ221	E.CAPACITOR 220U	1	
C1017		ECUM1H103KBV	C.CAPACITOR CH 50V 0.01U	1	
C1019		ECA0JKF121	E.CAPACITOR 6.3V 120U	1	
C1020		ECEA05KJ221	E.CAPACITOR 220U	1	
C1021		ECEA0JKS101	E.CAPACITOR 6.3V 100U	1	
C1022		ECUM1C104ZFV	C.CAPACITOR CH 16V 0.1U	1	
C1023		ECEA1ASE101	E.CAPACITOR 10V 100U	1	
C1024,25		ECEA1CKE101	E.CAPACITOR 16V 100U	2	
C1026		ECUM1H822KBV	C.CAPACITOR CH 50V 8200P	1	
C1027		ECUM1H272KBV	C.CAPACITOR CH 50V 2700U	1	
C1030,31		ECEA1EKK4R7	E.CAPACITOR 25V 4.7U	2	
C1032		ECEA1ASE101	E.CAPACITOR 10V 100U	1	
C1033		ECEA1CSE820	E.CAPACITOR 16V 82U	1	
C1034,35		ECEA1AKS330	E.CAPACITOR 10V 33U	2	
C1036		ECUM1C104ZFV	C.CAPACITOR CH 16V 0.1U	1	
C1037		ECEA1HKKR47L	E.CAPACITOR 50V 0.47U	1	
C1038		ECEA0JKA101	E.CAPACITOR 6.3V 100U	1	
C1039		ECUM1C105ZFN	C.CAPACITOR CH 16V 1U	1	
C2001,02		ECUM1H101JV	C.CAPACITOR CH 50V 100P	2	
C2003		ECUM1H103ZFV	C.CAPACITOR CH 50V 0.01U	1	
C2004		ECUM1C473ZFV	C.CAPACITOR CH 16V 0.047U	1	
C2005		ECEA0JKA470	E.CAPACITOR 6.3V 47U	1	
C2006		ECEA0JKS470	E.CAPACITOR 6.3V 47U	1	
C2007		ECUM1H472KBV	C.CAPACITOR CH 50V 4700P	1	
C2008		ECUM1H101JV	C.CAPACITOR CH 50V 100P	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
C2009,10		ECEA0JKS220	E.CAPACITOR 6.3V 22U	2	
C2011		ECUM1C473ZFV	C.CAPACITOR CH 16V 0.047U	1	
C2012		ECUM1H102KBV	C.CAPACITOR CH 50V 1000P	1	
C2013		ECUM1H471KBV	C.CAPACITOR CH 50V 470P	1	
C2014		ECEA1VSN2R2	E.CAPACITOR 35V 2.2U	1	
C2015,16		ECUM1C105ZFM	C.CAPACITOR CH 16V 1U	2	
C2017,18		ECUM1H102KBV	C.CAPACITOR CH 50V 1000P	2	
C2019		ECEA1AKA330	E.CAPACITOR 10V 33U	1	
C2020		ECUM1H820JCV	C.CAPACITOR CH 50V 82P	1	
C2021,22		ECUM1C105ZFM	C.CAPACITOR CH 16V 1U	2	
C2023		ECUM1H183KBN	C.CAPACITOR CH 50V 0.018U	1	
C2024		ECEA1CKK100	E.CAPACITOR 16V 10U	1	
C2025,26		ECEA0JKA101	E.CAPACITOR 6.3V 100U	2	
C2027		ECUM1H472KBV	C.CAPACITOR CH 50V 4700P	1	
C2028		ECUM1C105ZFM	C.CAPACITOR CH 16V 1U	1	
C2029		ECUM1H102KBV	C.CAPACITOR CH 50V 1000P	1	
C2030		ECUM1C104ZFV	C.CAPACITOR CH 16V 0.1U	1	
C2031		ECUM1C474ZFM	C.CAPACITOR CH 16V 0.47U	1	
C2032		ECUM1H103ZFV	C.CAPACITOR CH 50V 0.01U	1	
C2033		ECUM1C105ZFM	C.CAPACITOR CH 16V 1U	1	
C2034		ECUM1H101JV	C.CAPACITOR CH 50V 100P	1	
C2035		ECUM1H102KBV	C.CAPACITOR CH 50V 1000P	1	
C2036		ECUM1C104ZFV	C.CAPACITOR CH 16V 0.1U	1	
C2037		ECEA0JKS101	E.CAPACITOR 6.3V 100U	1	
C2038,39		ECEA1AKS330	E.CAPACITOR 10V 33U	2	
C2040		ECUM1H103ZFV	C.CAPACITOR CH 50V 0.01U	1	
C2041		ECUM1C105ZFM	C.CAPACITOR CH 16V 1U	1	
C2043		ECEA1CKK100	E.CAPACITOR 16V 10U	1	
C2044		ECUM1C104ZFV	C.CAPACITOR CH 16V 0.1U	1	
C2045		ECQV1H393JZ	P.CAPACITOR 50V 0.039U	1	
C2046		ECUM1H103ZFV	C.CAPACITOR CH 50V 0.01U	1	
C2047		ECUM1C105ZFM	C.CAPACITOR CH 16V 1U	1	
C2048,49		ECUM1H150JCV	C.CAPACITOR CH 50V 15P	2	
C2051		ECUM1C474ZFM	C.CAPACITOR CH 16V 0.47U	1	
C2053		ECEA0JKA470	E.CAPACITOR 6.3V 47U	1	
C2055		ECEA1CKK100	E.CAPACITOR 16V 10U	1	
C2056		ECEA0JKA470	E.CAPACITOR 6.3V 47U	1	
C2060		ECUM1C104ZFV	C.CAPACITOR CH 16V 0.1U	1	
C2061		ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	1	
C2062		ECUM1H103ZFV	C.CAPACITOR CH 50V 0.01U	1	
C3501		ECEA1ASJ101	E.CAPACITOR 10V 100U	1	
C3502,03		ECUM1H103ZFV	C.CAPACITOR CH 50V 0.01U	2	
C3511		ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	1	
C4001		ECEA1CKA101	E.CAPACITOR 16V 100U	1	
C4002		ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	1	
C4003		ECEA0JKA101	E.CAPACITOR 6.3V 100U	1	
C4005		ECEA0JKA470	E.CAPACITOR 6.3V 47U	1	
C4006		ECUM1H682KBN	C.CAPACITOR CH 50V 6800P	1	
C4007		ECEA0JKS220	E.CAPACITOR 6.3V 22U	1	
C4009		ECUM1H153KBN	C.CAPACITOR CH 50V 0.015U	1	
C4010		ECEA1HKK010	E.CAPACITOR 50V 1U	1	
C4011		ECUM1H391KBV	C.CAPACITOR CH 50V 390P	1	
C4013		ECUM1H151JV	C.CAPACITOR CH 50V 150P	1	
C4014		ECEA1AKA330	E.CAPACITOR 10V 33U	1	
C4015		ECUM1E333KBN	C.CAPACITOR CH 25V 0.033U	1	
C4017		ECEA1HSN010	E.CAPACITOR 50V 1U	1	
C4018		ECEA0JKS220	E.CAPACITOR 6.3V 22U	1	
C4019		ECEA1HKK010	E.CAPACITOR 50V 1U	1	
C4020		ECEA1EKK4R7	E.CAPACITOR 25V 4.7U	1	
C4021		ECEA1EKK3R3	E.CAPACITOR 25V 3.3U	1	
C4022		ECEA1HSN010	E.CAPACITOR 50V 1U	1	
C4023		ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	1	
C4024		ECEA0JKA101	E.CAPACITOR 6.3V 100U	1	
C4025		ECUM1H472KBN	C.CAPACITOR CH 50V 4700P	1	
C4026		ECUM1H153KBN	C.CAPACITOR CH 50V 0.015U	1	
C4027		ECEA1AKA330	E.CAPACITOR 10V 33U	1	
C4028		ECQP1682JZ	P.CAPACITOR 16V	1	
C4029		ECUM1E683ZFN	C.CAPACITOR CH 25V 0.063U	1	
C4030		ECEA1CKA470L	E.CAPACITOR 16V 47U	1	
C4031		ECUM1H472KBN	C.CAPACITOR CH 50V 4700P	1	
C4032		ECUM1H122KBV	C.CAPACITOR CH 50V 1200P	1	
C4033		ECUM1H151JCV	C.CAPACITOR CH 50V 150P	1	
C4034		ECUM1H682KBV	C.CAPACITOR CH 50V 6800P	1	
C6001		ECUM1C104ZFV	C.CAPACITOR CH 16V 0.1U	1	
C6002		ECEA0JSJ151	E.CAPACITOR 6.3V 150U	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
C6003		ECRJA030E12	V.CAPACITOR	1	
C6004		ECUM1H330JCV	C.CAPACITOR CH 50V 33P	1	
C6005		ECUM1H103KBV	C.CAPACITOR CH 50V 0.01U	1	
C6006		ECEA0JKS470	E.CAPACITOR 6.3V 47U	1	
C6007,08		ECUM1C104ZFV	C.CAPACITOR CH 16V 0.1U	2	
C6009,10		ECUM1H103KBV	C.CAPACITOR CH 50V 0.01U	2	
C6011		ECEA1CKK100	E.CAPACITOR 16V 10U	1	
C6012		ECUM1C104ZFV	C.CAPACITOR CH 16V 0.1U	1	
C6013,14		ECEA0JKS220	E.CAPACITOR 6.3V 22U	2	
C6015		ECEA1AKS330	E.CAPACITOR 10V 33U	1	
C6016		ECEA1CKS470	E.CAPACITOR 16V 47U	1	
C6017-20		ECUM1C104ZFV	C.CAPACITOR CH 16V 0.1U	4	
C6021		ECUM1H104ZFM	C.CAPACITOR CH 50V 0.1U	1	
D1001		MA738	DIODE	1	
D1002		MA121	DIODE	1	
D1003		MA736	DIODE	1	
D1004		SFPB-59	DIODE	1	
D1005		MA736	DIODE	1	
D1006		MA141A	DIODE	1	
D1007		DAP202U	DIODE	1	
D1008		MA141K	DIODE	1	
D1009		MA3075H	DIODE	1	
D1011,12		MA736	DIODE	2	
D1013		MA141K	DIODE	1	
D2001-04		DA204U	DIODE	4	
D2006,07		DAN202U	DIODE	2	
D2009		MA141K	DIODE	1	
D2010		MA141A	DIODE	1	
D2011		MA141K	DIODE	1	
D2013,14		MA141K	DIODE	2	
D3501		DAN202U	DIODE	1	
D4001		MA141K	DIODE	1	
D6001		MA141K	DIODE	1	
D6002		MA141A	DIODE	1	
D6004		MA159	DIODE	1	
D6007		DAP202U	DIODE	1	
D6008,09		DAN202U	DIODE	2	
D6010		MA141K	DIODE	1	
D6012		MA141K	DIODE	1	
D6013,14		DAP202U	DIODE	2	
D6015		MA141K	DIODE	1	
D6016		MA141A	DIODE	1	
D6017		DAP202U	DIODE	1	
D6018		DA204U	DIODE	1	
D6020		MA141A	DIODE	1	
D6021		DAP202U	DIODE	1	
D6022		MA3056	DIODE	1	
D6024		MA141K	DIODE	1	
IC1001		TL1453CNS	IC	1	
IC1003		LM2903M	IC	1	
IC1005		LM2904M	IC	1	
IC2001		MN67461VDJF	IC	1	
IC2002		AN3798NS	IC	1	
IC2003		MN1551VSSFS	IC	1	
IC4001		UPC2309AGS	IC	1	
IC6001		UPD75108GK26	IC	1	
IC6002		S81250HGRD	IC	1	
IC6003		UPD6145G617A	IC	1	
IC6004		S3500A3	IC	1	
IC6005		M54543ASL	IC	1	
IC6006		MN12821	IC	1	(Q)
IC6007		UPD4094BG	IC	1	
IC6008		LM2903M	IC	1	
J1001		VJJ0165	JACK	1	
J1002		VJH0555	JACK UNIT	1	VIDEO/AUDIO/RF-5V

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
L1001		ELC06D015	COIL	1	
L1002		ELC10D007	COIL	1	
L1003		ELC08D024	COIL	1	
L1004		ELC08D025	COIL 600UH	1	
L1005		ELC06D015	COIL	1	
L1006		ELC04D002	COIL	1	
L1007		VLQ0319K101	COIL H	1	
L1008		VLQ0319F221	COIL 220UH	1	
L1009		ELC04D006	COIL 120UH	1	
L1010		VLQ0319F221	COIL 220UH	1	
L1011		ELC04D002	COIL	1	
L4001		VLQEL05T101	COIL 100UH	1	
L4002		VLQEL07F822J	COIL 8200UH	1	
L4003		VLQEL07R153J	COIL 15H	1	
L4004		VLQEL05T101	COIL 100UH	1	
L6001		VLQ0163K330	COIL 33UH	1	
L6002		VLQEL04F221K	COIL 200UH	1	
P1001		VJP1607T	CONNECTOR(MALE)	1	
P1002		VJS2137	CONNECTOR	1	
P2001		VJS2794	CONNECTOR	1	
P3501		VJP2237	CONNECTOR (MALE)	1	
P3502		VJS2792	CONNECTOR	1	
P4001		VJP1607T	CONNECTOR(MALE)	1	
P4002		VJP1611T	CONNECTOR(MALE)	1	
P4003		VJP2262	CONNECTOR (MALE)	1	
P4004		VJP2264	CONNECTOR	1	
P6001		VJP2260	CONNECTOR (MALE)	1	
P6003		VJS2112	CONNECTOR (FEMALE)	1	
P6004		VJP1409	CONNECTOR(MALE)	1	
P6005		VJP2272	CONNECTOR (MALE)	1	
P6009		VJP2271	CONNECTOR (MALE)	1	
P6012		VJP2276	CONNECTOR	1	
Q1001,02		2SB956	TRANSISTOR	2	
Q1003		FMW1	TRANSISTOR-RESISTOR	1	
Q1004		2SB956	TRANSISTOR	1	
Q1005		2SD2177S	TRANSISTOR	1	(S)
Q1006,07		2SB798	TRANSISTOR	2	
Q1008		2SD1819	TRANSISTOR	1	
Q1009		2SB1218	TRANSISTOR	1	
Q1010,11		2SB956X	TRANSISTOR	2	
Q2001		2SD1819	TRANSISTOR	1	
Q3501-03		2SB970X	TRANSISTOR	3	
Q3508		FMS1	TRANSISTOR-RESISTOR	1	
Q4001		2SD1820	TRANSISTOR	1	
Q4002		2SB1219	TRANSISTOR	1	
Q4003		2SD1328	TRANSISTOR CHIP	1	
Q4004		2SD1819	TRANSISTOR	1	
Q4006		2SB1218	TRANSISTOR	1	
Q6003		XN4608X	TRANSISTOR	1	
Q6005-08		2SD1819	TRANSISTOR	4	
Q6009		2SB1218	TRANSISTOR	1	
QR1001		XN4111	TRANSISTOR-RESISTOR	1	
QR1002		GA1L4M	TRANSISTOR-RESISTOR	1	
QR1003		GN1L4L	TRANSISTOR-RESISTOR	1	
QR1005		IMD2	TRANSISTOR-RESISTOR	1	
QR1006		GA1L4M	TRANSISTOR-RESISTOR	1	
QR2003		GA1L4M	TRANSISTOR-RESISTOR	1	
QR2004,05		GN1F4Z	TRANSISTOR-RESISTOR	2	
QR2006		GA1L4Z	TRANSISTOR-RESISTOR	1	
QR2007		GA1L4M	TRANSISTOR-RESISTOR	1	
QR3501		FMG1	TRANSISTOR-RESISTOR	1	
QR3511		FMG1	TRANSISTOR-RESISTOR	1	
QR4002		GA1F4M	TRANSISTOR-RESISTOR	1	
QR6001-04		GA1F4Z	TRANSISTOR-RESISTOR	4	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
QR6005		GN1L4M	TRANSISTOR-RESISTOR	1	
QR6006		GN1A4Z	TRANSISTOR-RESISTOR	1	
QR6007		GA1F4Z	TRANSISTOR-RESISTOR	1	
QR6008		GA1L4M	TRANSISTOR-RESISTOR	1	
QR6009		XN4316	COMBI.PARTS	1	
QR6010,11		GA1F4Z	TRANSISTOR-RESISTOR	2	
QR6015		GN1F4M	TRANSISTOR-RESISTOR	1	
QR6016		GA1F4M	TRANSISTOR-RESISTOR	1	
QR6017		GA1L4L	TRANSISTOR-RESISTOR	1	
QR6022		GA1F4Z	TRANSISTOR-RESISTOR	1	
QR6026		GA1F4Z	TRANSISTOR-RESISTOR	1	
			RESISTORS		
R1001		VRE0034E393	M.RESISTOR CH 1/10W 39K	1	
R1002		ERJ3GEYJ102	M.RESISTOR CH 3W 1K	1	
R1003		ERJ3GEYJ124	M.RESISTOR CH 3W 120K	1	
R1004		ERJ8GCYJ821	M.RESISTOR CH 1/8W 820	1	
R1005		ERJ3GEYJ391	M.RESISTOR CH 3W 390	1	
R1006		ERJ3GEYJ273	M.RESISTOR CH 3W 27K	1	
R1007		ERJ3GEYJ153	M.RESISTOR CH 3W 15K	1	
R1008		ERJ3GEYJ105	M.RESISTOR CH 3W 1M	1	
R1009		ERJ3GEYJ682	M.RESISTOR CH 3W 6.8K	1	
R1010		ERJ3GEYJ102	M.RESISTOR CH 3W 1K	1	
R1011,12		ERJ3GEYJ182	M.RESISTOR CH 3W 1.8K	2	
R1015		ERJ8GCYJ821	M.RESISTOR CH 1/8W 820	1	
R1017		ERJ3GEYJ391	M.RESISTOR CH 3W 390	1	
R1019		ERJ3GEYJ391	M.RESISTOR CH 3W 390	1	
R1020		ERJ8GCYJ681	M.RESISTOR CH 1/8W 680	1	
R1021		ERJ3GEYJ391	M.RESISTOR CH 3W 390	1	
R1023		ERJ3GEYJ105	M.RESISTOR CH 3W 1M	1	
R1024		ERJ3GEYJ334	M.RESISTOR CH 3W 330K	1	
R1025		ERJ3GEYJ822	M.RESISTOR CH 3W 8.2K	1	
R1026		ERJ3GEYJ222	M.RESISTOR CH 3W 2.2K	1	
R1027		ERJ3GEYJ104	M.RESISTOR CH 3W 100K	1	
R1028		ERJ3GEYJ821	M.RESISTOR CH 3W 820	1	
R1029,30		ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	2	
R1031		ERJ6GMYJ122	M.RESISTOR CH 1/10W 1.2K	1	
R1032		ERJ6GMYJ153	M.RESISTOR CH 1/10W 15K	1	
R1033		ERJ6GMYJ273	M.RESISTOR CH 1/10W 27K	1	
R1034		ERJ6GMYG154	M.RESISTOR CH 1/10W 150K	1	
R1035		ERJ3GEYJ103	M.RESISTOR CH 3W 10K	1	
R1036		ERJ3GEYJ561	M.RESISTOR CH 3W 560	1	
R1037		ERJ8GCYJ330	M.RESISTOR CH 1/8W 33	1	
R1038		ERJ3GEYJ104	M.RESISTOR CH 3W 100K	1	
R1039		ERJ8GCYJ560	M.RESISTOR CH 1/8W 56	1	
R1040		ERJ3GEYJ105	M.RESISTOR CH 3W 1M	1	
R1041		ERJ3GEYJ184	M.RESISTOR CH 3W 180K	1	
R1042		ERJ3GEYJ472	M.RESISTOR CH 3W 4.7K	1	
R1043		ERJ3GEYJ561	M.RESISTOR CH 3W 560	1	
R1044,45		ERJ3GEYJ104	M.RESISTOR CH 3W 100K	2	
R1048		ERJ3GEYJ104	M.RESISTOR CH 3W 100K	1	
R1049		ERJ3GEYJ473	M.RESISTOR CH 3W 47K	1	
R1050		ERJ6GMYJ105	M.RESISTOR CH 1/10W 1M	1	
R1051		ERJ3GEYJ223	M.RESISTOR CH 3W 22K	1	
R1052-54		ERJ3GEYJ103	M.RESISTOR CH 3W 10K	3	
R1055		ERJ3GEYJ123	M.RESISTOR CH 3W 12K	1	
R1056		ERJ3GEYJ223	M.RESISTOR CH 3W 22K	1	
R1057,58		ERJ3GEYJ103	M.RESISTOR CH 3W 10K	2	
R1059		ERJ3GEYJ123	M.RESISTOR CH 3W 12K	1	
R1060		ERJ3GEYJ393	M.RESISTOR CH 3W 39K	1	
R1061		ERJ3GEYJ183	M.RESISTOR CH 3W 18K	1	
R1062		ERJ3GEY0R00	M.RESISTOR CH 3W 0.00	1	
R1064		ERJ6GMY0R00	M.RESISTOR CH 1/10W 0	1	
R1065		ERJ3GEYJ103	M.RESISTOR CH 3W 10K	1	
R1071		VSF0059	FUSE	1	
R1072		VSF0015A15	FUSE	1	
R2001,02		ERJ3GEYJ102	M.RESISTOR CH 3W 1K	2	
R2003		ERJ3GEYJ392	M.RESISTOR CH 3W 3.9K	1	
R2004		ERJ3GEYJ333	M.RESISTOR CH 3W 33K	1	
R2005,06		ERJ3GEYJ104	M.RESISTOR CH 3W 100K	2	
R2007		ERJ3GEYJ154	M.RESISTOR CH 3W 150K	1	
R2009		ERJ3GEYJ154	M.RESISTOR CH 3W 150K	1	
R2010		ERJ3GEYJ103	M.RESISTOR CH 3W 10K	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
R2011		ERJ3GEYJ683	M.RESISTOR CH 3W 68K	1	
R2012		ERJ3GEYJ334	M.RESISTOR CH 3W 330K	1	
R2013		ERJ3GEYJ154	M.RESISTOR CH 3W 150K	1	
R2014		ERJ3GEYJ473	M.RESISTOR CH 3W 47K	1	
R2015		ERJ3GEYJ183	M.RESISTOR CH 3W 18K	1	
R2016		ERJ3GEY0R00	M.RESISTOR CH 3W 0.00	1	
R2017		ERJ3GEYJ103	M.RESISTOR CH 3W 10K	1	
R2018		ERJ3GEYJ471	M.RESISTOR CH 3W 470	1	
R2019		ERJ3GEYJ105	M.RESISTOR CH 3W 1M	1	
R2020		ERJ3GEYJ222	M.RESISTOR CH 3W 2.2K	1	
R2022		ERJ3GEYJ271	M.RESISTOR CH 3W 270	1	
R2024		ERJ3GEYJ152	M.RESISTOR CH 3W 1.5K	1	
R2025		ERJ3GEYJ682	M.RESISTOR CH 3W 6.8K	1	
R2026		ERJ3GEYJ333	M.RESISTOR CH 3W 33K	1	
R2027		ERJ3GEYJ563	M.RESISTOR CH 3W 56K	1	
R2028		ERJ6GMYJ393	M.RESISTOR CH 1/10W 39K	1	
R2029		ERJ3GEYJ105	M.RESISTOR CH 3W 1M	1	
R2030		ERJ3GEYJ103	M.RESISTOR CH 3W 10K	1	
R2031		ERJ3GEYJ273	M.RESISTOR CH 3W 27K	1	
R2032		ERJ3GEYJ333	M.RESISTOR CH 3W 33K	1	
R2033		ERJ3GEYJ272	M.RESISTOR CH 3W 2.7K	1	
R2034		ERJ3GEY0R00	M.RESISTOR CH 3W 0.00	1	
R2035		ERJ3GEYJ154	M.RESISTOR CH 3W 150K	1	
R2036		ERJ3GEYJ123	M.RESISTOR CH 3W 12K	1	
R2038		ERJ3GEYJ223	M.RESISTOR CH 3W 22K	1	
R2040		ERJ6GMY0R00	M.RESISTOR CH 1/10W 0	1	
R2041		ERJ3GEYJ334	M.RESISTOR CH 3W 330K	1	
R2043		ERJ3GEYJ102	M.RESISTOR CH 3W 1K	1	
R2045,46		ERJ3GEY0R00	M.RESISTOR CH 3W 0.00	2	
R2048		ERJ6GMYJ221	M.RESISTOR CH 1/10W 220	1	
R2050,51		ERJ3GEYJ333	M.RESISTOR CH 3W 33K	2	
R2052		ERJ3GEYJ392	M.RESISTOR CH 3W 3.9K	1	
R2053		ERJ3GEYJ682	M.RESISTOR CH 3W 6.8K	1	
R2054		ERJ3GEYJ562	M.RESISTOR CH 3W 5.6K	1	
R2056		ERJ3GEYJ221	M.RESISTOR CH 3W 220	1	
R2057		ERJ3GEYJ105	M.RESISTOR CH 3W 1M	1	
R2059		ERJ3GEY0R00	M.RESISTOR CH 3W 0.00	1	
R2064		ERJ3GEYJ104	M.RESISTOR CH 3W 100K	1	
R3501		ERJ3GEYJ332	M.RESISTOR CH 3W 3.3K	1	
R3502		ERJ3GEYJ682	M.RESISTOR CH 3W 6.8K	1	
R3503		ERJ3GEYJ472	M.RESISTOR CH 3W 4.7K	1	
R3504		ERJ3GEYJ272	M.RESISTOR CH 3W 2.7K	1	
R3505		ERJ3GEYJ332	M.RESISTOR CH 3W 3.3K	1	
R3507,08		ERJ3GEYJ472	M.RESISTOR CH 3W 4.7K	2	
R3526		ERJ3GEYJ102	M.RESISTOR CH 3W 1K	1	
R3527		ERJ3GEYJ153	M.RESISTOR CH 3W 15K	1	
R3528		ERJ3GEYJ393	M.RESISTOR CH 3W 39K	1	
R3529		ERJ3GEYJ223	M.RESISTOR CH 3W 22K	1	
R3530,31		ERJ3GEYJ103	M.RESISTOR CH 3W 10K	2	
R4002		ERJ3GEYJ561	M.RESISTOR CH 3W 560	1	
R4004		ERJ3GEYJ181	M.RESISTOR CH 3W 180	1	
R4005		ERJ3GEYJ182	M.RESISTOR CH 3W 1.8K	1	
R4006		ERJ3GEYJ223	M.RESISTOR CH 3W 22K	1	
R4007		ERJ3GEYJ153	M.RESISTOR CH 3W 15K	1	
R4008		ERJ3GEYJ333	M.RESISTOR CH 3W 33K	1	
R4009		ERJ3GEYJ100	M.RESISTOR CH 3W 10	1	
R4010		ERJ3GEYJ151	M.RESISTOR CH 3W 150	1	
R4012		ERJ3GEYJ184	M.RESISTOR CH 3W 180K	1	
R4013		ERJ3GEYJ272	M.RESISTOR CH 3W 2.7K	1	
R4014		ERJ3GEYJ333	M.RESISTOR CH 3W 33K	1	
R4015		ERJ3GEYJ105	M.RESISTOR CH 3W 1M	1	
R4016		ERJ3GEYJ104	M.RESISTOR CH 3W 100K	1	
R4017		ERJ3GEYJ153	M.RESISTOR CH 3W 15K	1	
R4018		ERJ3GEYJ123	M.RESISTOR CH 3W 12K	1	
R4019		ERJ3GEYJ681	M.RESISTOR CH 3W 680	1	
R4020		ERJ3GEYJ272	M.RESISTOR CH 3W 2.7K	1	
R4021		ERJ3GEYJ101	M.RESISTOR CH 3W 100	1	
R4022		ERJ3GEYJ473	M.RESISTOR CH 3W 47K	1	
R4023		ERJ3GEYJ224	M.RESISTOR CH 3W 220K	1	
R4024,25		ERJ3GEYJ272	M.RESISTOR CH 3W 2.7K	2	
R4026		ERJ3GEYJ223	M.RESISTOR CH 3W 22K	1	
R4033		ERJ3GEYJ333	M.RESISTOR CH 3W 33K	1	
R4034		ERJ3GEYJ473	M.RESISTOR CH 3W 47K	1	
R4035		ERJ6GMYJ333	M.RESISTOR CH 1/10W 33K	1	
R4036		ERJ3GEYJ471	M.RESISTOR CH 3W 470	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
R4037		ERJ3GEYJ683	M.RESISTOR CH 3W 68K	1	
R4038		ERJ3GEYJ333	M.RESISTOR CH 3W 33K	1	
R4039		ERJ3GEYJ563	M.RESISTOR CH 3W 56K	1	
R4040		ERJ3GEYJ122	M.RESISTOR CH 3W 1.2K	1	
R4041		ERJ3GEY0R00	M.RESISTOR CH 3W 0.00	1	
R6001		ERJ3GEYJ473	M.RESISTOR CH 3W 47K	1	
R6004		ERJ3GEYJ331	M.RESISTOR CH 3W 330	1	
R6006		ERJ3GEYJ103	M.RESISTOR CH 3W 10K	1	
R6007		ERJ6GMYJ683	M.RESISTOR CH 1/10W 68K	1	
R6008-10		ERJ3GEYJ683	M.RESISTOR CH 3W 68K	3	
R6011,12		ERJ3GEYJ473	M.RESISTOR CH 3W 47K	2	
R6014		ERJ3GEYJ683	M.RESISTOR CH 3W 68K	1	
R6015		ERJ6GMYJ104	M.RESISTOR CH 1/10W 100K	1	
R6016		ERJ6GMYJ683	M.RESISTOR CH 1/10W 68K	1	
R6017		ERJ3GEYJ331	M.RESISTOR CH 3W 330	1	
R6018		ERJ3GEYJ102	M.RESISTOR CH 3W 1K	1	
R6019		ERJ3GEYJ154	M.RESISTOR CH 3W 150K	1	
R6020		ERJ3GEYJ473	M.RESISTOR CH 3W 47K	1	
R6021		ERJ3GEYJ123	M.RESISTOR CH 3W 12K	1	
R6022		ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	1	
R6023		ERJ3GEYJ273	M.RESISTOR CH 3W 27K	1	
R6024		ERJ3GEYJ124	M.RESISTOR CH 3W 120K	1	
R6025		ERJ3GEYJ563	M.RESISTOR CH 3W 56K	1	
R6026		ERJ6GMYJ334	M.RESISTOR CH 1/10W 330K	1	
R6027		ERJ6GMYJ823	M.RESISTOR CH 1/10W 82K	1	
R6028		ERJ3GEYJ124	M.RESISTOR CH 3W 120K	1	
R6029		ERJ3GEYJ473	M.RESISTOR CH 3W 47K	1	
R6030,31		ERJ3GEYJ223	M.RESISTOR CH 3W 22K	2	
R6032		ERJ3GEYJ473	M.RESISTOR CH 3W 47K	1	
R6033		ERJ3GEYJ224	M.RESISTOR CH 3W 220K	1	
R6034		ERJ3GEYJ153	M.RESISTOR CH 3W 15K	1	
R6036		ERJ3GEYJ184	M.RESISTOR CH 3W 180K	1	
R6039		ERJ3GEYJ683	M.RESISTOR CH 3W 68K	1	
R6040		ERJ3GEYJ102	M.RESISTOR CH 3W 1K	1	
R6043		ERJ6GMYJ100	M.RESISTOR CH 1/10W 10	1	
R6044		ERJ3GEYJ473	M.RESISTOR CH 3W 47K	1	
R6045		ERJ3GEYJ471	M.RESISTOR CH 3W 470	1	
R6047		ERJ3GEYJ473	M.RESISTOR CH 3W 47K	1	
R6048		ERJ3GEYJ394	M.RESISTOR CH 3W 390K	1	
R6049		ERJ3GEYJ223	M.RESISTOR CH 3W 22K	1	
R6050,51		ERJ3GEYJ101	M.RESISTOR CH 3W 100	2	
R6052,53		ERJ3GEYJ104	M.RESISTOR CH 3W 100K	2	
R6054		ERJ3GEYJ103	M.RESISTOR CH 3W 10K	1	
R6055,56		ERJ3GEYJ104	M.RESISTOR CH 3W 100K	2	
R6057-61		ERJ3GEYJ102	M.RESISTOR CH 3W 1K	5	
R6062		ERJ3GEYJ152	M.RESISTOR CH 3W 1.5K	1	
R6063		ERJ3GEYJ822	M.RESISTOR CH 3W 8.2K	1	
R6064		ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	1	
R6065,66		ERJ3GEYJ102	M.RESISTOR CH 3W 1K	2	
R6067		ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	1	
R6068		ERJ3GEYJ392	M.RESISTOR CH 3W 3.9K	1	
R6069		ERJ3GEYJ182	M.RESISTOR CH 3W 1.8K	1	
R6070		ERJ3GEYJ102	M.RESISTOR CH 3W 1K	1	
R6072,73		ERJ3GEYJ102	M.RESISTOR CH 3W 1K	2	
R6075		ERJ3GEYJ683	M.RESISTOR CH 3W 68K	1	
R6076		ERJ3GEYJ104	M.RESISTOR CH 3W 100K	1	
R6077		ERJ3GEYJ223	M.RESISTOR CH 3W 22K	1	
R6078		ERJ3GEYJ224	M.RESISTOR CH 3W 220K	1	
R6079		ERJ3GEYJ473	M.RESISTOR CH 3W 47K	1	
R6080		ERJ3GEYJ154	M.RESISTOR CH 3W 150K	1	
R6081		ERJ3GEYJ473	M.RESISTOR CH 3W 47K	1	
R6087		ERJ6GMYJ332	M.RESISTOR CH 1/10W 3.3K	1	
R6088,89		ERJ3GEYJ683	M.RESISTOR CH 3W 68K	2	
R6090		ERJ6GMYJ683	M.RESISTOR CH 1/10W 68K	1	
R6091,92		ERJ3GEYJ683	M.RESISTOR CH 3W 68K	2	
R6093		ERJ3GEYJ473	M.RESISTOR CH 3W 47K	1	
R6097,98		ERJ3GEYJ102	M.RESISTOR CH 3W 1K	2	
R6099		ERJ6GMYJ473	M.RESISTOR CH 1/10W 47K	1	
R6100,01		ERJ3GEYJ103	M.RESISTOR CH 3W 10K	2	
R6102		ERJ3GEYJ102	M.RESISTOR CH 3W 1K	1	
R6103		ERJ3GEYJ683	M.RESISTOR CH 3W 68K	1	
R6104		ERJ6GMYJ683	M.RESISTOR CH 1/10W 68K	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
SW6001,02		EVQQFV02K	SWITCH	2	
T1001		ELL10R014	TRANSFORMER	1	
T4001		EIQ7QF016Q	TRANSFORMER	1	
VR1001		EVM7JSX30B23	V.RESISTOR W	1	
VR1002		EVM7JSX30B53	V.RESISTOR 5K	1	
VR1003		EVM7JSX30B52	V.RESISTOR 500	1	
VR2001		EVM7JSX30B15	V.RESISTOR 100K	1	
VR4001		EVM7JSX30B54	V.RESISTOR 50K	1	
VR4002		EVM7JSX30B15	V.RESISTOR 100K	1	
VR6001		EVM7JSX30B24	V.RESISTOR 20K	1	
X2001		VSX0154	CRYSTAL OSCILLATOR	1	
X6001		VSX0299	CRYSTAL OSCILLATOR	1	
X6002		VSX0249	CRYSTAL OSCILLATOR	1	
			MISCELLANEOUS		
		VSC2970	BARRIER(TOP)	1	
		VSC2971	BARRIER(MAIN)	1	
		VSC2972	BARRIER(BOTTOM)	1	
		VWJ0399	FLEXIBLE CARD	1	P6003-FP001
		VMX1563	LUMI/CHRO PACK LOCK HINGE	1	
		VMZ1490	POWER BARRIER	1	
		VSC3115	IC SHIELD BARRIER	1	
	■	VEP03769A	LUMINANCE/CHROMINANCE C.B.A		(NLA)
			CAPACITORS		
C3001,02		ECEA0JSJ151	E.CAPACITOR 6.3V 150U	2	
C3003		ECEA1CSN4R7	E.CAPACITOR 16V 4.7U	1	
C3004		ECST1VY104ZR	T.CAPACITOR 35V 0.1U	1	
C3005		ECEA1CKK100	E.CAPACITOR 16V 10U	1	
C3006		ECUM1H330JCV	C.CAPACITOR CH 50V 33P	1	
C3007		ECUM1H220JCV	C.CAPACITOR CH 50V 22P	1	
C3008		ECUM1H150JCV	C.CAPACITOR CH 50V 15P	1	
C3009,10		ECEA1EKK4R7	E.CAPACITOR 25V 4.7U	2	
C3011		ECUM1H820JCV	C.CAPACITOR CH 50V 82P	1	
C3012		ECUM1H470JCV	C.CAPACITOR CH 50V 47P	1	
C3013		ECUM1H220JCV	C.CAPACITOR CH 50V 22P	1	
C3015		ECEA1EKK2R2	E.CAPACITOR 25V 2.2U	1	
C3016		ECUM1H820JCV	C.CAPACITOR CH 50V 82P	1	
C3017		ECEA1EKK2R2	E.CAPACITOR 25V 2.2U	1	
C3018		ECUM1H273ZFN	C.CAPACITOR CH 50V 0.027U	1	
C3019		ECEA1EKK4R7	E.CAPACITOR 25V 4.7U	1	
C3020		ECEA0JKS101	E.CAPACITOR 6.3V 100U	1	
C3021		ECSF1CE106	T.CAPACITOR 16V 10U	1	
C3022,23		ECUM1H103ZFV	C.CAPACITOR CH 50V 0.01U	2	
C3024		ECUM1H150JCV	C.CAPACITOR CH 50V 15P	1	
C3025		ECUM1H103ZFV	C.CAPACITOR CH 50V 0.01U	1	
C3026		ECUM1H102KBV	C.CAPACITOR CH 50V 1000P	1	
C3027		ECEA1EKK4R7	E.CAPACITOR 25V 4.7U	1	
C3030		ECUM1H103ZFV	C.CAPACITOR CH 50V 0.01U	1	
C3031		ECEA1CKK100	E.CAPACITOR 16V 10U	1	
C3032		ECUM1C104ZFV	C.CAPACITOR CH 16V 0.1U	1	
C3033		ECEA1EKK4R7	E.CAPACITOR 25V 4.7U	1	
C3034		ECUM1H103ZFV	C.CAPACITOR CH 50V 0.01U	1	
C3035		ECEA1HKK010	E.CAPACITOR 50V 1U	1	
C3036		ECEA0JKA470	E.CAPACITOR 6.3V 47U	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
C3037		ECUM1C104ZFV	C.CAPACITOR CH 16V 0.1U	1	
C3038		ECUM1H103ZFV	C.CAPACITOR CH 50V 0.01U	1	
C3039		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C3040		ECEA1CKK100	E.CAPACITOR 16V 10U	1	
C3041		ECUM1H103ZFV	C.CAPACITOR CH 50V 0.01U	1	
C3043		ECUM1H103ZFV	C.CAPACITOR CH 50V 0.01U	1	
C3044		ECEA0GKS221	E.CAPACITOR 4V 220U	1	
C3045		ECEA1HKK010	E.CAPACITOR 50V 1U	1	
C3046		ECEA1CKK100	E.CAPACITOR 16V 10U	1	
C3047		ECUM1H181JCN	C.CAPACITOR CH 50V 180P	1	
C3048		ECUM1H220JCV	C.CAPACITOR CH 50V 22P	1	
C3049		ECUM1H820JCV	C.CAPACITOR CH 50V 82P	1	
C3050		ECUM1H390JCV	C.CAPACITOR CH 50V 39P	1	
C3051		ECUM1H560JCV	C.CAPACITOR CH 50V 56P	1	
C3053		ECUM1H103ZFV	C.CAPACITOR CH 50V 0.01U	1	
C3054		ECEA0JKA101	E.CAPACITOR 6.3V 100U	1	
C3055		ECUM1H103ZFV	C.CAPACITOR CH 50V 0.01U	1	
C3056		ECEA0JKS470	E.CAPACITOR 6.3V 47U	1	
C3057		ECUM1H103ZFV	C.CAPACITOR CH 50V 0.01U	1	
C3061		ECUM1H330JCV	C.CAPACITOR CH 50V 33P	1	
C3065		ECUM1H120JCV	C.CAPACITOR CH 50V 12P	1	
C3066		ECUM1H820JV	C.CAPACITOR CH 50V 82P	1	
C3067		ECUM1H221JCV	C.CAPACITOR CH 50V 220P	1	
C3068		ECUM1H103ZFV	C.CAPACITOR CH 50V 0.01U	1	
C3070		ECEA1CKK100	E.CAPACITOR 16V 10U	1	
C3071		ECEA0GKS221	E.CAPACITOR 4V 220U	1	
C3073		ECUM1H471KBV	C.CAPACITOR CH 50V 470P	1	
C3075		ECUM1H560JCV	C.CAPACITOR CH 50V 56P	1	
C3076		ECUM1H270JCV	C.CAPACITOR CH 50V 27P	1	
C3079		ECUM1H103ZFV	C.CAPACITOR CH 50V 0.01U	1	
C3081		ECUM1H102ZFV	C.CAPACITOR CH 50V 1000P	1	
C3150		ECUM1H151JV	C.CAPACITOR CH 50V 150P	1	
C8301		ECUM1H103ZFV	C.CAPACITOR CH 50V 0.01U	1	
C8302		ECUM1H330JCV	C.CAPACITOR CH 50V 33P	1	
C8501		ECUM1H103ZFV	C.CAPACITOR CH 50V 0.01U	1	
C8502		ECUM1H390JCV	C.CAPACITOR CH 50V 39P	1	
C8503,04		ECUM1H103ZFV	C.CAPACITOR CH 50V 0.01U	2	
C8505		ECEA0JKA101	E.CAPACITOR 6.3V 100U	1	
C8506		ECUM1H103ZFV	C.CAPACITOR CH 50V 0.01U	1	
C8507		ECUM1H222KBV	C.CAPACITOR CH 50V 2200P	1	
C8508		ECQB1H222JZ	P.CAPACITOR 50V 2200P	1	
C8509		ECUM1H222KBV	C.CAPACITOR CH 50V 2200P	1	
C8510,11		ECUM1H103ZFV	C.CAPACITOR CH 50V 0.01U	2	
C8520-26		ECUM1H103ZFV	C.CAPACITOR CH 50V 0.01U	7	
C8527		ECUM1H330JCV	C.CAPACITOR CH 50V 33P	1	
C8528		ECUM1H181JCV	C.CAPACITOR CH 50V 180P	1	
C8529		ECUM1H120JCV	C.CAPACITOR CH 50V 12P	1	
C8530		ECUM1H470JCV	C.CAPACITOR CH 50V 47P	1	
C8531,32		ECUM1H103ZFV	C.CAPACITOR CH 50V 0.01U	2	
C8533		ECEA0JKA470	E.CAPACITOR 6.3V 47U	1	
C8534		ECUM1H103ZFV	C.CAPACITOR CH 50V 0.01U	1	
C8535		ECUM1H101JCV	C.CAPACITOR CH 50V 100P	1	
C8536,37		ECUM1H103ZFV	C.CAPACITOR CH 50V 0.01U	2	
C8540		ECUM1H471KBV	C.CAPACITOR CH 50V 470P	1	
C8541		ECUM1H273ZFV	C.CAPACITOR CH 50V 0.027U	1	
C8542,43		ECUM1H103ZFV	C.CAPACITOR CH 50V 0.01U	2	
C8544		ECEA0JKS470	E.CAPACITOR 6.3V 47U	1	
C8546		ECUM1H103ZFV	C.CAPACITOR CH 50V 0.01U	1	
C8550,51		ECUM1H680JCV	C.CAPACITOR CH 50V 68P	2	
C8552		ECEA0JKA470	E.CAPACITOR 6.3V 47U	1	
C8553		ECUM1H103ZFV	C.CAPACITOR CH 50V 0.01U	1	
D3002		DAN202U	DIODE	1	
D3003		MA141K	DIODE	1	
D3005		MA141K	DIODE	1	
D8501		MA141K	DIODE	1	
D8502,03		1SS283	DIODE	2	
FL3001		ELB4D007	FILTER	1	
FL3002		VLF0806	FILTER	1	
FL3003		ELB4A020	FILTER	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
FL3004		ELB4D008	FILTER	1	
FL8501		ELB4D033	FILTER	1	
FL8502		ELB4C042	FILTER	1	
FL8503		ELB4B018	FILTER	1	
FL8504		ELB4B020	FILTER	1	
FL8505		ELB4C004	FILTER	1	
FL8506		ELB5B006	FILTER	1	
FL8507		VLF0625	FILTER	1	
IC3001		VEFH08D	IC	1	
IC3002		MST001MS	IC	1	
IC3003		AN3580SB	IC	1	
IC3004		TL8809F	IC	1	
IC8501		AN6397S	IC	1	
IC8502		AN6398S	IC	1	
L3001,02		VLQEL05T101	COIL 100UH	2	
L3003		VLQEL04X180	COIL 18UH	1	
L3004		VLQEL04X121	COIL 120UH	1	
L3005		VLQEL04X101	COIL 101UH	1	
L3007		VLQEL05T101	COIL 100UH	1	
L3008		VLQEL04X101	COIL 101UH	1	
L3009		VLQEL05T101	COIL 100UH	1	
L3010		VLQEL04X330	COIL 33UH	1	
L3011		VLQEL04X101	COIL 101UH	1	
L3012		VLQEL04X150	COIL 15UH	1	
L3013		VLQEL05T101	COIL 100UH	1	
L3015		VLQEL04X470	COIL 47UH	1	
L3016		VLQEL04X101	COIL 101UH	1	
L3017		VLQEL04X100	COIL 10UH	1	
L3020		VLQEL04X470	COIL 47UH	1	
L8301		VLQEL04X101	COIL 101UH	1	
L8501		VLQEL05T101	COIL 100UH	1	
L8503		VLQEL04X221	COIL H	1	
L8504		VLQEL05T101	COIL 100UH	1	
L8510		VLQEL04X560	COIL H	1	
L8511		VLQEL04X330	COIL 33UH	1	
L8520		VLQEL05T101	COIL 100UH	1	
L8521		VLQEL04X330	COIL 33UH	1	
P3001		VJS2237	CONNECTOR	1	
P3002		VJP2263	CONNECTOR	1	
Q3001		2SD1819	TRANSISTOR	1	
Q3002		2SC3931	TRANSISTOR	1	
Q3003		2SD1819	TRANSISTOR	1	
Q3005,06		2SD1819	TRANSISTOR	2	
Q3007		2SC3931	TRANSISTOR	1	
Q3008		2SD1819	TRANSISTOR	1	
Q3010		2SD1819	TRANSISTOR	1	
Q3012		2SC3931	TRANSISTOR	1	
Q3013,14		2SB1218	TRANSISTOR	2	
Q3015		2SC3931	TRANSISTOR	1	
Q3020,21		2SD1819	TRANSISTOR	2	
Q8501		2SC3931	TRANSISTOR	1	
Q8502		2SD1819	TRANSISTOR	1	
Q8510,11		2SD1328	TRANSISTOR CHIP	2	
Q8512		2SC3931	TRANSISTOR	1	
Q8513		2SB1219	TRANSISTOR	1	
Q8515		2SB1218	TRANSISTOR	1	
Q8516		2SC3931	TRANSISTOR	1	
Q8517		2SB1218	TRANSISTOR	1	
QR3004		FMG1	TRANSISTOR-RESISTOR	1	
QR8502,03		GA1A4M	TRANSISTOR-RESISTOR	2	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
			RESISTORS		
R3001,02		ERJ3GEYJ561	M.RESISTOR CH 3W 560	2	
R3003,04		ERJ3GEYJ102	M.RESISTOR CH 3W 1K	2	
R3005		ERJ3GEYJ272	M.RESISTOR CH 3W 2.7K	1	
R3006		ERJ3GEYJ182	M.RESISTOR CH 3W 1.8K	1	
R3007		ERJ3GEYJ561	M.RESISTOR CH 3W 560	1	
R3008		ERJ3GEYJ102	M.RESISTOR CH 3W 1K	1	
R3010		ERJ3GEYJ102	M.RESISTOR CH 3W 1K	1	
R3011		ERJ3GEYJ821	M.RESISTOR CH 3W 820	1	
R3012		ERJ3GEYJ102	M.RESISTOR CH 3W 1K	1	
R3013,14		ERJ3GEYJ273	M.RESISTOR CH 3W 27K	2	
R3015		ERJ3GEYJ821	M.RESISTOR CH 3W 820	1	
R3016,17		ERJ3GEYJ103	M.RESISTOR CH 3W 10K	2	
R3018		ERJ3GEYJ472	M.RESISTOR CH 3W 4.7K	1	
R3019		ERJ3GEYJ102	M.RESISTOR CH 3W 1K	1	
R3021		ERJ3GEYJ152	M.RESISTOR CH 3W 1.5K	1	
R3022		ERJ3GEY0R00	M.RESISTOR CH 3W 0.00	1	
R3023,24		ERJ3GEYJ223	M.RESISTOR CH 3W 22K	2	
R3025		ERJ3GEYJ181	M.RESISTOR CH 3W 180	1	
R3026		ERJ3GEYJ101	M.RESISTOR CH 3W 100	1	
R3027		ERJ3GEYJ331	M.RESISTOR CH 3W 330	1	
R3028		ERJ3GEYJ682	M.RESISTOR CH 3W 6.8K	1	
R3029		ERJ3GEYJ123	M.RESISTOR CH 3W 12K	1	
R3030		ERJ3GEYJ391	M.RESISTOR CH 3W 390	1	
R3031		ERJ3GEYJ123	M.RESISTOR CH 3W 12K	1	
R3032		ERJ3GEYJ102	M.RESISTOR CH 3W 1K	1	
R3033		ERJ3GEYJ471	M.RESISTOR CH 3W 470	1	
R3035		ERJ3GEYJ750	M.RESISTOR CH 3W 75	1	
R3036,37		ERJ3GEYJ223	M.RESISTOR CH 3W 22K	2	
R3039		ERJ3GEYJ391	M.RESISTOR CH 3W 390	1	
R3040,41		ERJ3GEYJ821	M.RESISTOR CH 3W 820	2	
R3042		ERJ6GMY0R00	M.RESISTOR CH 1/10W 0	1	
R3044		ERJ3GEYJ680	M.RESISTOR CH 3W 68	1	
R3045,46		ERJ3GEYJ102	M.RESISTOR CH 3W 1K	2	
R3048		ERJ3GEYJ272	M.RESISTOR CH 3W 2.7K	1	
R3049,50		ERJ3GEYJ102	M.RESISTOR CH 3W 1K	2	
R3052		ERJ3GEYJ333	M.RESISTOR CH 3W 33K	1	
R3053		ERJ3GEYJ153	M.RESISTOR CH 3W 15K	1	
R3054		ERJ3GEYJ102	M.RESISTOR CH 3W 1K	1	
R3059		ERJ3GEYJ102	M.RESISTOR CH 3W 1K	1	
R3062		ERJ3GEYJ103	M.RESISTOR CH 3W 10K	1	
R3063		ERJ3GEYJ562	M.RESISTOR CH 3W 5.6K	1	
R3071		ERJ3GEYJ392	M.RESISTOR CH 3W 3.9K	1	
R3072		ERJ3GEYJ561	M.RESISTOR CH 3W 560	1	
R3073		ERJ3GEYJ101	M.RESISTOR CH 3W 100	1	
R3074		ERJ3GEYJ102	M.RESISTOR CH 3W 1K	1	
R3075		ERJ3GEYJ681	M.RESISTOR CH 3W 680	1	
R3076		ERJ3GEYJ391	M.RESISTOR CH 3W 390	1	
R3077		ERJ3GEYJ102	M.RESISTOR CH 3W 1K	1	
R3080		ERJ3GEYJ102	M.RESISTOR CH 3W 1K	1	
R3081		ERJ3GEYJ561	M.RESISTOR CH 3W 560	1	
R3082		ERJ3GEYJ122	M.RESISTOR CH 3W 1.2K	1	
R3083		ERJ3GEYJ272	M.RESISTOR CH 3W 2.7K	1	
R3085		ERJ3GEYJ122	M.RESISTOR CH 3W 1.2K	1	
R3086		ERJ3GEYJ102	M.RESISTOR CH 3W 1K	1	
R3087		ERJ3GEYJ104	M.RESISTOR CH 3W 100K	1	
R3088		ERJ3GEYJ102	M.RESISTOR CH 3W 1K	1	
R3089		ERJ3GEY0R00	M.RESISTOR CH 3W 0.00	1	
R3091		ERJ3GEYJ222	M.RESISTOR CH 3W 2.2K	1	
R3092		ERJ3GEY0R00	M.RESISTOR CH 3W 0.00	1	
R3093		ERJ3GEYJ102	M.RESISTOR CH 3W 1K	1	
R3095		ERJ3GEYJ105	M.RESISTOR CH 3W 1M	1	
R8301		ERJ3GEYJ152	M.RESISTOR CH 3W 1.5K	1	
R8501		ERJ3GEYJ682	M.RESISTOR CH 3W 6.8K	1	
R8502		ERJ3GEYJ102	M.RESISTOR CH 3W 1K	1	
R8503		ERJ3GEYJ820	M.RESISTOR CH 3W 82	1	
R8504		ERJ3GEYJ102	M.RESISTOR CH 3W 1K	1	
R8505		ERJ3GEYJ103	M.RESISTOR CH 3W 10K	1	
R8506		ERJ3GEYJ102	M.RESISTOR CH 3W 1K	1	
R8507,08		ERJ3GEYJ103	M.RESISTOR CH 3W 10K	2	
R8509		ERJ3GEYJ102	M.RESISTOR CH 3W 1K	1	
R8510		ERJ3GEY0R00	M.RESISTOR CH 3W 0.00	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
R8512		ERJ3GEYJ272	M.RESISTOR CH 3W 2.7K	1	
R8513,14		ERJ3GEYJ331	M.RESISTOR CH 3W 330	2	
R8515		ERJ3GEYJ390	M.RESISTOR CH 3W 39	1	
R8516-18		ERJ3GEYJ102	M.RESISTOR CH 3W 1K	3	
R8519		ERJ3GEYJ561	M.RESISTOR CH 3W 560	1	
R8520		ERJ3GEYJ122	M.RESISTOR CH 3W 1.2K	1	
R8521		ERJ3GEYJ102	M.RESISTOR CH 3W 1K	1	
R8522,23		ERJ3GEYJ821	M.RESISTOR CH 3W 820	2	
R8524		ERJ3GEYJ122	M.RESISTOR CH 3W 1.2K	1	
R8525,26		ERJ3GEYJ103	M.RESISTOR CH 3W 10K	2	
R8527		ERJ3GEYJ4R7	M.RESISTOR CH 3W 4.7	1	
R8528,29		ERJ3GEYJ103	M.RESISTOR CH 3W 10K	2	
R8530		ERJ3GEYJ8R2	M.RESISTOR CH 3W 8.2	1	
R8531		ERJ3GEYJ821	M.RESISTOR CH 3W 820	1	
R8532		ERJ3GEYJ331	M.RESISTOR CH 3W 330	1	
R8533		ERJ3GEYJ101	M.RESISTOR CH 3W 100	1	
R8534		ERJ3GEYJ151	M.RESISTOR CH 3W 150	1	
R8535		ERJ3GEYJ122	M.RESISTOR CH 3W 1.2K	1	
R8536,37		ERJ3GEYJ223	M.RESISTOR CH 3W 22K	2	
R8538		ERJ3GEYJ102	M.RESISTOR CH 3W 1K	1	
R8539		ERJ3GEYJ181	M.RESISTOR CH 3W 180	1	
R8540		ERJ3GEYJ563	M.RESISTOR CH 3W 56K	1	
R8541		ERJ3GEYJ153	M.RESISTOR CH 3W 15K	1	
R8542		ERJ3GEYJ222	M.RESISTOR CH 3W 2.2K	1	
R8543		ERJ3GEYJ271	M.RESISTOR CH 3W 270	1	
R8550		ERJ3GEYJ472	M.RESISTOR CH 3W 4.7K	1	
R8551		ERJ3GEYJ103	M.RESISTOR CH 3W 10K	1	
R8552		ERJ3GEYJ123	M.RESISTOR CH 3W 12K	1	
R8553		ERJ3GEYJ392	M.RESISTOR CH 3W 3.9K	1	
R8554		ERJ3GEYJ122	M.RESISTOR CH 3W 1.2K	1	
R8555		ERJ3GEYJ222	M.RESISTOR CH 3W 2.2K	1	
R8556		ERJ3GEYJ102	M.RESISTOR CH 3W 1K	1	
R8557		ERJ3GEYJ222	M.RESISTOR CH 3W 2.2K	1	
R8558		ERJ3GEYJ152	M.RESISTOR CH 3W 1.5K	1	
R8559		ERJ3GEYJ333	M.RESISTOR CH 3W 33K	1	
R8560		ERJ3GEYJ683	M.RESISTOR CH 3W 68K	1	
R8561		ERJ3GEYJ271	M.RESISTOR CH 3W 270	1	
R8562		ERJ3GEYJ222	M.RESISTOR CH 3W 2.2K	1	
T8501,02		EIK5EB001B	TRANSFORMER	2	
VR3001,02		EVM7JSX30B23	V.RESISTOR W	2	
VR3003		EVM7JSX30B52	V.RESISTOR 500	1	
VR3004		EVM7JSX30B54	V.RESISTOR 50K	1	
VR3005		EVM7JSX30B52	V.RESISTOR 500	1	
VR8501		EVM7JSX30B24	V.RESISTOR 20K	1	
VR8502,03		EVM7JSX30B53	V.RESISTOR 5K	2	
X8301		VSX0131	CRYSTAL OSCILLATOR	1	
	■	VEP02349A	DRIVE C.B.A.		(NLA)
			CAPACITORS		
C2602-04		ECEA1EKK4R7	E.CAPACITOR 25V 4.7U	3	
C2605,06		ECEA0JKA470	E.CAPACITOR 6.3V 47U	2	
C2607-09		ECEA1EKK4R7	E.CAPACITOR 25V 4.7U	3	
C2610		ECEA1CKS470	E.CAPACITOR 16V 47U	1	
C2611		ECEA1CKK100	E.CAPACITOR 16V 10U	1	
C2612		ECEA0JKS220	E.CAPACITOR 6.3V 22U	1	
C2613-15		ECUM1H103ZFV	C.CAPACITOR CH 50V 0.01U	3	
C2616		ECUM1H102KBV	C.CAPACITOR CH 50V 1000P	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
C2617-19		ECUM1C104ZFV	C.CAPACITOR CH 16V 0.1U	3	
C2620-22		ECUM1C333ZFV	C.CAPACITOR CH 16V 0.033U	3	
C2623		ECUM1H221JV	C.CAPACITOR CH 50V 220P	1	
C2624,25		ECUM1C104ZFV	C.CAPACITOR CH 16V 0.1U	2	
C2626		ECUM1H103ZFV	C.CAPACITOR CH 50V 0.01U	1	
C2627		ECUM1C104ZFV	C.CAPACITOR CH 16V 0.1U	1	
C2628		ECUM1H103ZFV	C.CAPACITOR CH 50V 0.01U	1	
C2629		ECUM1C104ZFV	C.CAPACITOR CH 16V 0.1U	1	
C2630		ECUM1H103ZFV	C.CAPACITOR CH 50V 0.01U	1	
C2631		ECEA0JKS470	E.CAPACITOR 6.3V 47U	1	
C2632		ECEA1CKS470	E.CAPACITOR 16V 47U	1	
D2601		MA141K	DIODE	1	
IC2601		BA6456FS	IC	1	
IC2602		AN3819FBS	IC	1	
IC2603		TDM3700	IC	1	
IC2604,05		ON2170LF	IC	2	
P2601		VJP2794	CONNECTOR	1	
P2602		VJS2582B015	CONNECTOR (FEMALE)	1	
P2603		VJS2325	CONNECTOR	1	
P2604,05		VJP2271	CONNECTOR (MALE)	2	
P2606		VJP2260	CONNECTOR (MALE)	1	
Q2601		2SD1819	TRANSISTOR	1	
			RESISTORS		
R2601		ERJ3GEYJ331	M.RESISTOR CH 3W 330	1	
R2602		ERJ3GEYJ104	M.RESISTOR CH 3W 100K	1	
R2603		ERJ3GEYJ123	M.RESISTOR CH 3W 12K	1	
R2604		ERJ3GEYJ333	M.RESISTOR CH 3W 33K	1	
R2605		ERJ12YJR68H	M.RESISTOR 0.68	1	
R2606-08		ERJ8GCYK4R7	M.RESISTOR CH 1/8W 4.7	3	
R2609		ERJ3GEYJ221	M.RESISTOR CH 3W 220	1	
R2610		ERJ3GEYJ101	M.RESISTOR CH 3W 100	1	
R2611		ERJ3GEYJ102	M.RESISTOR CH 3W 1K	1	
R2612		ERJ3GEYJ471	M.RESISTOR CH 3W 470	1	
R2613		ERJ3GEYJ121	M.RESISTOR CH 3W 120	1	
R2614		ERJ3GEYJ274	M.RESISTOR CH 3W 270K	1	
R2615		ERJ3GEYJ104	M.RESISTOR CH 3W 100K	1	
R2616		ERJ8GCYJR33	M.RESISTOR CH 1/8W 0.33	1	
R2617		ERJ3GEYJ392	M.RESISTOR CH 3W 3.9K	1	
R2618		ERJ3GEYJ104	M.RESISTOR CH 3W 100K	1	
R2619,20		ERJ3GEYJ103	M.RESISTOR CH 3W 10K	2	
R2621		ERJ3GEYJ331	M.RESISTOR CH 3W 330	1	
R2630		ERJ8GCYJ101	M.RESISTOR CH 1/8W 100	1	
			MISCELLANEOUS		
		VMZ1092	BARRIER	1	
		VMD1275	REEL SENSOR HOLDER (S)	1	
	■	VEP05147A	HEAD AMP C.B.A.		(NIA)
			CAPACITORS		

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
C5001		ECUM1H103ZFV	C.CAPACITOR CH 50V 0.01U	1	
C5002		ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	1	
C5003		ECUM1H103ZFV	C.CAPACITOR CH 50V 0.01U	1	
C5004		ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	1	
C5005		ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	1	
C5006		ECEA1CKS470	E.CAPACITOR 16V 47U	1	
C5007		ECUM1H103ZFV	C.CAPACITOR CH 50V 0.01U	1	
C5008		ECEA0JKS470	E.CAPACITOR 6.3V 47U	1	
C5009		ECUM1H103ZFV	C.CAPACITOR CH 50V 0.01U	1	
C5010		ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	1	
C5011		ECUM1H103ZFV	C.CAPACITOR CH 50V 0.01U	1	
C5013		ECUM1C105ZFN	C.CAPACITOR CH 16V 1U	1	
C5014		ECUM1H103ZFV	C.CAPACITOR CH 50V 0.01U	1	
C5015		ECUM1H680JCV	C.CAPACITOR CH 50V 68P	1	
C5016,17		ECUM1H103ZFV	C.CAPACITOR CH 50V 0.01U	2	
C5018		ECUM1H680JCV	C.CAPACITOR CH 50V 68P	1	
C5019		ECUM1H103ZFV	C.CAPACITOR CH 50V 0.01U	1	
C5020		ECUM1C105ZFN	C.CAPACITOR CH 16V 1U	1	
C5022,23		ECUM1C105ZFN	C.CAPACITOR CH 16V 1U	2	
C5025		ECUM1H103ZFV	C.CAPACITOR CH 50V 0.01U	1	
C5026,27		ECUM1H680JCV	C.CAPACITOR CH 50V 68P	2	
C5028-30		ECUM1H103ZFV	C.CAPACITOR CH 50V 0.01U	3	
C5031		ECUM1C105ZFN	C.CAPACITOR CH 16V 1U	1	
C5033		ECEA0JKS470	E.CAPACITOR 6.3V 47U	1	
C5034		ECUM1H103ZFV	C.CAPACITOR CH 50V 0.01U	1	
C5035,36		ECUM1E103KBV	C.CAPACITOR CH 25V 0.01U	2	
C5037		ECUM1C104ZFV	C.CAPACITOR CH 16V 0.1U	1	
C5038		ECUM1H151JV	C.CAPACITOR CH 50V 150P	1	
C5039		ECUM1H121JCV	C.CAPACITOR CH 50V 120P	1	
C5040		ECUM1H390JCV	C.CAPACITOR CH 50V 39P	1	
C5041-44		ECUM1H472KBV	C.CAPACITOR CH 50V 4700P	4	
IC5001		AN3346FBP	IC	1	
L5001-03		VLQ0319K101	COIL H	3	
L5004		VLQ0163K100	COIL 10UH	1	
L5005		ELJFA120KF	COIL H	1	
P5001		VJP2245	CONNECTOR (MALE)	1	
P5002		VJS2236T	CONNECTOR (FEMALE)	1	
P5003		VJP2260	CONNECTOR (MALE)	1	
Q5001		2SB1218	TRANSISTOR	1	
Q5002		2SA812	TRANSISTOR	1	
Q5003		2SA1175	TRANSISTOR	1	
Q5004,05		XN4504	TRANSISTOR-RESISTOR	2	
QR5001		GA1A4Z	TRANSISTOR-RESISTOR	1	
QR5002,03		FMG1	TRANSISTOR-RESISTOR	2	
			RESISTORS		
R5001		ERJ3GEYJ152	M.RESISTOR CH 3W 1.5K	1	
R5002		ERJ3GEYJ103	M.RESISTOR CH 3W 10K	1	
R5003-05		ERJ3GEYJ102	M.RESISTOR CH 3W 1K	3	
R5006		ERJ3GEYJ471	M.RESISTOR CH 3W 470	1	
R5007		ERJ3GEYJ681	M.RESISTOR CH 3W 680	1	
R5009		ERJ3GEYJ103	M.RESISTOR CH 3W 10K	1	
R5010		ERJ3GEYJ222	M.RESISTOR CH 3W 2.2K	1	
R5011,12		ERJ3GEYJ100	M.RESISTOR CH 3W 10	2	
R5013,14		ERJ3GEYJ222	M.RESISTOR CH 3W 2.2K	2	
R5015,16		ERJ3GEYJ100	M.RESISTOR CH 3W 10	2	
R5017,18		ERJ3GEYJ681	M.RESISTOR CH 3W 680	2	
R5019		ERJ3GEYJ222	M.RESISTOR CH 3W 2.2K	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
R5020		ERJ3GEYJ103	M.RESISTOR CH 3W 10K	1	
R5021-24		ERJ3GEYJ333	M.RESISTOR CH 3W 33K	4	
R5025		ERJ3GEYJ393	M.RESISTOR CH 3W 39K	1	
R5026		ERJ3GEYJ822	M.RESISTOR CH 3W 8.2K	1	
R5027		ERJ3GEYJ271	M.RESISTOR CH 3W 270	1	
R5028		ERJ3GEYJ391	M.RESISTOR CH 3W 390	1	
R5031-34		ERJ3GEYJ472	M.RESISTOR CH 3W 4.7K	4	
R5035-38		ERJ3GEYJ103	M.RESISTOR CH 3W 10K	4	
R5040		ERJ8GCYJ4R7	M.RESISTOR CH 1/8W 4.7	1	
R5041,42		ERJ3GEYJ681	M.RESISTOR CH 3W 680	2	
R5043		ERJ3GEYJ684	M.RESISTOR CH 3W 680K	1	
R5044		ERJ3GEYJ222	M.RESISTOR CH 3W 2.2K	1	
			MISCELLANEOUS		
		VSC2946	SHIELD (BOTTOM)	1	
		VMZ1534	HEAD AMP SHIELD BARRIER	1	
	■	VEP06592B	VTR OPERATION C.B.A.		(NLA)
D6302-04		MA165	DIODE	3	
D6305		BR2202S-20	DIODE	1	
D6306		AY2222S	DIODE	1	
P6301		VJS1409	CONNECTOR(FEMALE)	1	
P6302		VJP1613T	CONNECTOR	1	
QR6301		UN1113	TRANSISTOR-RESISTOR	1	
			RESISTORS		
R6301		ERDS2TJ331	C.RESISTOR 1/4W 330	1	
R6304		ERDS2TJ103	C.RESISTOR 1/4W 10K	1	
R6305		ERDS2TJ182	C.RESISTOR 1/4W 1.8K	1	
R6306		ERDS2TJ222	C.RESISTOR 1/4W 2.2K	1	
R6307		ERDS2TJ272	C.RESISTOR 1/4W 2.7K	1	
R6308		ERDS2TJ472	C.RESISTOR 1/4W 4.7K	1	
R6309		ERDS2TJ331	C.RESISTOR 1/4W 330	1	
SW6302-05		EVQ11404M	SWITCH	4	
SW6308-11		EVQ11404M	SWITCH	4	
SW6312		ESD100126	SWITCH	1	
SW6313		ESE153AH01	SWITCH	1	
	■	VEK4413	START/STOP SW C.B.A.		(NLA)
D1501		BR2202S-20	DIODE	1	
SW1501		EVQQSU04W	SWITCH	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
	■	VEK3971	ZOOM SW C.B.A.		(NLA)
	■	VEK4733	EARPHONE JACK C.B.A.		(NLA)
			CAPACITORS		
C4301		ECEA1AKA470	E.CAPACITOR 10V 47U	1	
J4301		VJJ0203	JACK	1	
			RESISTORS		
R4301		ERDS2TJ820	C.RESISTOR 1/4W 82	1	